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CONSTRUCTION DISPUTES IN THE PUGET SOUND
A BROAD PERSPECTIVE

by
B.F. Dammeier
Autumn 1988

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Bruce F. Dammeier

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Submitted in Partial Fulfillment
of the Requirements for a
Master of Science in Engineering
from the
University of Washington
Autumn 1988

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Prior to proceeding with the actual report, I would like to gratefully acknowledge the assistance of the following individuals and firms for taking time from their schedules to participate in this research effort.

Firm

Interviewee

CONSTRUCTION CONTRACTORS

Ferguson Construction
Glad Construction Group, Inc.
J.B. Mechanical Contractors
Northwest Electric Co.
Paschen Contractors, Inc.
SDL Corporation
Sellen Construction Co.
Turner Construction
W.G. Clark Construction Co.
Woodworth & Company, Inc.

Mark P. Lunsford
A. Don Glad
John D. Barringer
Susan A. Garrison
Jack Rawlings
David Lowry
Richard Redman
August M. Sestrap
Chris L. Clark
John A. Woodworth

DESIGN FIRMS

Anderson Bjornstad Kane Jacob
Brown and Caldwell
Callison Partnership
CENTRAC
Dames and Moore
Hewitt Daly Isley
John Graham Associates
Martenson & Associates
Northwest Architectural Co.
R.W. Beck and Associates

Thomas F. Mahoney
Jack Warburton
Richard Meyer
Gareth A. Grube
Joseph Lamont, Jr.
James Daly
James C. Pearce
Richard Martenson
Dale Brookie
Donald R. Melnick

LAW FIRMS

Bryan, Schiffman & McMonagle
Culp Guterson and Grader
Davis, Wright & Jones
Ferguson & Burdell
James M. Kristof
Lawrence & Associates
Oles, Morrison, Rinker
Taylor & Hintze
Ulin Dann Elston and Lambe
Williams Kastner and Gibbs

Daniel S. McMonagle
Tyler Ellrodt
David Groff
Bryan E. Lee
James M. Kristof
Kerry C. Lawrence
Brad Powell
Randall Zuke
Wade Dann
Judd Lees

(Firm addresses, telephone numbers, and the positions of the interviewees are listed in Appendix A.)



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CONSTRUCTION DISPUTES IN THE PUGET SOUND: A BROAD PERSPECTIVE

CHAPTER 1 - INTRODUCTION

1.1 The Problem. A large segment of our society firmly believes that it can live risk-free, and can therefore attribute any and all problems to someone else. This attitude has resulted in a "liability explosion," in which these people bring lawsuits to recover from the party that they perceive has wronged them. The construction industry has not been spared from the effects of this "explosion." Additionally, the costs of preparing a construction case for trial or arbitration have expanded exponentially. In an age of scarce resources, the industry is using far too many of them resolving disputes through formal channels. This approach drastically reduces the overall efficiency of the building process.

1.2 The Need for Research. If more disputes could be resolved outside of the extremely slow and expensive legal system, tremendous financial and personnel assets would be freed for direct construction. This increased efficiency would, in turn, reduce the total cost of projects.

1.3 The Goal of the Research. The goals of this research project are twofold: first, to identify both problem areas that precipitate disputes and controls that have been successful in avoiding them, and second, to foster better communication among the parties involved in the construction process. The intent of the final report is to promote more realistic expectations, communication, and ultimately resolution of disputes before a third party judgment is required.

CHAPTER 2 - REVIEW OF THE LITERATURE

This chapter is a summary of the pertinent information that has been published on the subject of construction disputes. The information serves as the background for this report.

2.1 The Litigation Climate. The U.S. is currently witnessing what can be referred to as a "litigation explosion" (DPIC, 1988). The impacts of this explosion are most dramatically felt in the "liability crisis" that is altering how business is conducted.

Design professionals have been hit hard by the increased prospect of getting sued and the increased difficulty of obtaining professional liability coverage. Recently, professional liability insurance rates have skyrocketed, increasing for structural engineers by more than 300 percent from 1983 to 1987 and for all designers in excess of 100 percent (Cohen, 1987; Rubin, 1987). Even though a firm may be able to pay the increased premiums, it must first find a company willing to provide the coverage. In some fields, such as structural engineering, obtaining coverage is becoming extremely difficult. The number of insurers in that field dropped from 12 in 1983 to only two in 1986 (Godfrey, 1986). For those not able to obtain insurance coverage, the only options that remain are self-insuring or going without coverage, referred to as "going bare," both of which pose potentially catastrophic risks (Kraker, 1988; Sweet, 1985). The impact on the architect/engineer (A&E) community was clearly shown in the recent Progressive Architect reader's

poll, which reported that liability considerations affect the day-to-day decisions of 90 percent of designers (Progressive Architect, 1986).

According to former American Institute of Architects (AIA) president, Mr. John Berry, the crisis extends beyond the designers. He says, "All professionals are in the same boat" (AIA/Architectural Record Symposium, June 1986). Construction contractors have been faced with both higher insurance rates and fewer bonding sources. Bonding, the "life blood" of the modern contractor, is required for virtually all public and private work of significant size. After a disastrous year in 1986, when the surety industry lost \$1.1 billion, it has drastically changed underwriting procedures and forced many contractors out of the market (Krizan, 1988). The financial impacts of lawsuits on the sureties precipitated these cutbacks in bonding.

The question then becomes, what are the reasons and sources of the disputes that gave rise to this crisis?

2.1.1 Primary Reasons for a Litigious Climate. In the search for the "big picture" reason behind the high number of legal disputes in the construction industry, several potential areas leap to the forefront. Those that deserve the most attention are society, lawyers and the legal system, insurance companies, and the nature of construction.

* SOCIETY. Many authors see our society as "suit happy," with citizens who believe that we need not take responsibility for the risks of daily living (Hinze, 1981; Parks, 1986). There is very little concern for who was at fault; instead the focus is on who

has the money, as society fully embraces the "deep pockets" theory. A California court expressed the fundamental policy when it said the following:

Our number one concern is that the parties hurt are treated equitably. We will get the money to do that from whichever party we can, and let the parties to the job decide who owes whom (Godfrey, 1986).

* THE LEGAL SYSTEM AND ATTORNEYS. Our legal system draws its share of criticism and has been said to have gone "berserk in balancing the rights of the plaintiff and defendants" (Parks, 1986). Although lawyers have been thought to precipitate law suits in pursuit of legal fees, there is no significant evidence that this is the case in construction litigation. The available claims data indicate that attorneys are merely responding to the market demand created in the construction environment (Franklin, 1986; AIA/Architectural Record Symposium, March 1986).

* INSURANCE COMPANIES. Somewhat surprisingly, the insurance industry readily admits that its actions have magnified the impact of the crisis. One insurance company vice president, Mr. Paul Genecki, explained that shoddy underwriting in the late 1970s and early 1980s, done in an effort to gain a tremendous volume of premiums and capitalize on the high interest rates, backfired. When the interest rates fell, the companies were left with huge amounts of liability for premiums that were far too low to cover the claims (AIA/Architectural Record Symposium, June 1986). The net result was that the premiums since 1983 have had to be raised

to try and recover from the bad risks undertaken earlier. Beyond the part that insurance companies played in the inception of the crisis, the access to the "deep pockets" of insurers motivates many claimants. Since all parties are expected to have insurance, whether they are actually covered or not does not become apparent until a suit is filed. Therefore, the presence of insurance may not affect whether a party is sued, but it has been shown to dramatically affect the cost of resolving the case (Ostrower, 1985). Parties rarely want to undergo the expense of a law suit if the possibility of collecting a judgment is doubtful. This reasoning is cited by Mr. Bob Young of Robert E. Young Engineers of Sacramento. He points to a case in which his firm was forced to pay \$600,000 from its professional liability insurance policy for an injury that occurred on a job site, only because the firm had coverage. Since then, his firm has "gone bare" and has not had a single major claim against it. On one personal injury accident in which several parties were named, the claimant's attorney dropped a firm from the suit when he discovered it did not have insurance (Godfrey, 1986).

* THE CONSTRUCTION INDUSTRY. The construction industry has not emerged without its share of blame. Former AIA president, Mr. John Busby, said, "I think that we're beginning to see the profession move into the business world" (AIA/Architectural Record Symposium, March 1986). The industry is inherently risky, and some see the tighter underwriting procedures by bonding companies as a necessary vehicle to weed out inefficient contractors (Rubin, 1983; Krizan,

1988). Furthermore, in service industries such as construction, liability is defined by negligence as determined by a "reasonable standard of care." Despite the importance of maintaining uniform standards, tremendous variations exist among disciplines and regions. Mr. Ed Howell of Design Professional's Insurance Company (DPIC), showed the flaw in this policy when he explained that "Any ambiguity in standards of care make legal defense almost impossible when something goes wrong" (Godfrey, 1986).

2.1.2 Primary Sources of Disputes. Many surveys have been conducted to identify the somewhat elusive major sources of disputes. The following discussion of the sources of disputes combines the results of four separate polls, with a total sample size of nearly 1,000 covering architects, utility contractors, and 500 actual disputes (Hinze, 1981; Hohns, 1979; Nielsen, 1982; Progressive Architect, 1986). Note that the generic source of "changed conditions" has not been listed separately but is included in the more specific categories of Defective Specifications and Time Related Issues. For example, roofs have often been listed as the biggest source of claims (Franklin, 1986), but these are usually the result of design defects. The other frequently noted problem of subsurface conditions is included under delays because the impact costs can easily exceed the direct expenses.

* DEFECTIVE DRAWINGS AND SPECIFICATIONS. Errors in the drawings and technical specifications proved to be the number one source of disputes identified by two of the surveys and the second leading cause in the others.

* PAYMENTS. Ultimately, all disputes come down to an issue of failure to pay; however, this category encompasses disputes in which the failure to pay was the initial source of the problem. The most common occurrence is when one party decides not to pay for a service that allegedly was originally in the contract. The unpaid party is then forced to seek legal assistance in the form of a mechanic's lien or court judgment for payment. This problem is most often experienced by subcontractors and suppliers but is also experienced by designers and general contractors. This issue was listed as the second source of disputes in one poll and the third in another. The other two polls excluded pure payment issues from their results. However, Professor Justin Sweet cites an owner's limited financial resources as dramatically increasing the potential for a claim made against the designer or failure to pay the contractor, as does DPIC (Sweet, 1985; DPIC, 1988).

* AMBIGUOUS WORDING. Two polls cited unclear wording as a leading area that is likely to produce disputes. In one poll, it ranked first and in another third, while it was not listed in the other two surveys.

* TIME RELATED ISSUES. The old adage that time is money is never more true than in a construction dispute. The overhead costs associated with a multiple-tiered project combined with the owner's inability to use the facility make delays a losing situation for all parties (O'Brien, 1976). Time and delay costs are the most costly items in most disputes (Hohns, 1979). The Stanford Research Institute brought the issue of time into perspective with its findings that construction projects generally "slip" 66 percent for each year they were originally scheduled, i.e. a project scheduled to take 12 months would be completed in 20. This category also encompasses the cumulative impact of multiple smaller changes, better known as ripple effect. This impact often results in the final breakdown in communication between parties in the construction process (DPIC, 1988). Although it was not listed as an option in three of the polls, the one listing this response showed it as the number four problem area.

* PEOPLE PROBLEMS. The final category that emerged as significant in much of the available literature was disputes resulting from people issues. This category includes management decisions as well as less tangible areas such as poor communication. H. Murray Hohns emphasizes this aspect of disputes:

I have learned over the years that people are the cause and solution to virtually every construction problem. The man who is the student of people and who has learned to judge and motivate his peers by setting an example, invariably ends up ahead in disputes as well as in other aspects of life (Hohns, 1979).

Mr. Gerald Farquhar of Victor O. Schinnerer, a leading insurer of design professionals, says that 80 percent of all claims are caused by management failures (Cohen, 1987). One of the management failures most commonly noted is the lack of an adequate construction review (formerly called inspection). This field review is the designer's opportunity to ensure that the intent of the design is being followed. This has been found to be the single greatest cause of claims against A&Es by DPIC of San Francisco, who refuses to cover designers "who do not spend a certain minimum time performing construction review" (Howell, 1982).

Poor communication skills also play a large role in most disputes. Effective verbal and written communication does not come easily, especially when it is combined with the anxiety and stress of resolving issues in an adversarial relationship. DPIC's "Lessons in Professional Liability: A Notebook for Design Professionals" points to the critical role of communication:

Litigation ... results from a breakdown in understanding between the parties involved - either in the communication of the professional endeavor itself [the contract documents] or in the practical working communication between you [the designer] and others on the construction scene (DPIC, 1988).

Although this source was only addressed in one of the four surveys, where it accounted for the fourth cause, a separate survey of 693 respondents pointed out the magnitude of the problem.

When asked to identify the cause of the most common inspection problems, 67 percent of the respondents indicated that they were not the result of actual conditions on the site but of problems with either the inspection staff (41 percent) or contractor personnel (26 percent) (Fisk, 1982).

* JOBSITE ACCIDENTS. A special comment is merited on personal injury and wrongful death actions resulting from jobsite accidents. They are unquestionably the most emotional and dramatic of the cases in litigation and are estimated to make up 20 percent of the claims (Parks, 1986). Many of the injuries result from safety violations that could arguably be listed as a management failure. However, these cases are generally excluded from the broad traditional realm of construction law and are included under personal injury law. Therefore, they will be excluded from the scope of this report.

2.1.3 Dispute Frequency and Size. The question of whether the frequency of disputes in construction has increased produces a mixed response. Mr. Peter Hawes, the president of DPIC Companies, and Professor Justin Sweet felt that designers in particular faced a much higher potential of finding themselves in a dispute in the latter half of the 1980s (DPIC, 1987; Sweet, 1985). However, Mr. Homer Sandridge of Victor O. Schinnerer counters that the number of claims has remained relatively constant since 1983 (Sichelman, 1987). Engineering News Record statistics support Sandridge's view with the following information (Rubin, 1987):

<u>Year</u>	<u>Claims/100 A&E Firms</u>
1983	35
1984	43
1985	39
1986	33
1987	46

There is little question that the size of individual claims have increased dramatically. Mr. Sandridge's information reveals that the average claim now exceeds \$100,000, which corresponds to records showing an increase in professional liability premiums from 100 to 300 percent and an increasing number of designers "going bare" (up to 23 percent) since 1983 (Sichelman, 1987, Rubin, 1987, Progressive Architect, 1986).

2.2 Owners. As discussed earlier, construction is a service industry. The designer's skill creates, in the form of drawings and specifications, a facility as requested by the owner. The contractor then takes that design and transforms it from paper into reality, again using specialized skills in coordination and construction. Of all the parties in the process, the owner is generally the only one who does not make a living in construction. Owners usually apply capital in order to obtain facilities that will help them operate more efficiently and ultimately make them more profitable. An examination of how the owner affects the process must differentiate between the two primary types of owners, public and private. This section of the report looks at the differences between these two types and the characteristics of both good and bad owners.

2.2.1 Public v. Private. Very little information has been written about private owners relative to their public counterparts. However, one general characterization that is made deals with the nature of disputes that each type experiences. The vast majority of disputes involving private owners are the result of failure to pay. This problem stems from highly leveraged or unscrupulous owners. Public owners, on the other hand are much more likely to be involved in claims over delays, changes, and design errors (Hinze, 1981).

Government, or public sector, owners account for 80 percent of disputes, according to Mr. H. Murray Hohns (Hohns, 1979). Much of this can be explained by extending the "deep pockets theory" to what is perceived as the ultimate "deep pocket." The various levels of government have countered by attempting to create contracts that prevent such abuses. These contracts tend to put all the risk on the contractor, who is viewed as "the enemy" (Rubin, 1983). The public predicament is further complicated by government's attempt to achieve social goals in its contracting. According to Mr. James J. O'Brien, the "... sealed low-bid type contract in public building is almost a shotgun marriage and starts to fall apart immediately, or at least comes under heavy strain"

(O'Brien, 1976). Public owners have been characterized as being slow and hardened by the claims process, accustomed to overstatement, and desensitized to individual claims, although they do settle countless well-presented and fairly priced claims daily (Hohns, 1979).

One striking public sector horror story about the bureaucratic disputes process lies in the recently resolved claim by Purvis Construction Company. Purvis was awarded a \$3 million contract by the General Services Administration (GSA) for the construction of the U.S. Science Pavillion for the 1962 World's Fair in Seattle, Washington. Despite over 50 change orders, Purvis completed the project on time but was denied \$700,000 in acceleration claims. After 23 decisions by the GSA Board of Contract Appeals, 26 years, and an Act of Congress, the company finally received its money in 1988 (Kraker, 1988).

2.2.2 Characteristics. Some characteristics of owners emerge from a review of pertinent literature. Good owners reflect qualities such as honesty, fairness, patience, and firmness (Goldbloom, 1982). Bad owners, on the other hand, are often characterized by custom contracts that prove to be onerous. They do not understand that such contracts discourage responsible bidders, that exculpatory language is often unenforceable, and that those who do bid look to make up money in the disputes process (Rubin, 1983).

2.3 Attorneys and the Legal System. Attorneys have a rather dubious reputation in the U.S., and the construction industry is no different in this respect. Many within the industry agree with Mr. Peter G. Kelly's attitude:

Just as an idle mind is the plaything of the devil, the marvelously innocent words of the performing design professions [or contractor] become the diabolical playthings of the practicing lawyer (Kelly, 1975).

Despite this view of attorneys, many people in construction run unhesitatingly for legal counsel when they perceive that they have been wronged in any fashion. Often they would be better off heeding the following advice:

[An attorney's role] ... is to point out those clearly hazardous legal paths that would almost guarantee failure. Litigation costs money. It should be entered into most carefully and thoughtfully. The first and last piece of advice given by most lawyers is settle (O'Brien, 1976).

2.3.1 The Attorney. If a dispute arises, any party hiring an attorney should remember that the lawyer will have a tremendous impact on the ultimate outcome of the dispute. Therefore, several areas of attorney selection deserve special consideration.

* BACKGROUND. Construction litigation has become a highly specialized field of practice and, generally, a knowledgeable attorney, well versed in the field, is required for a successful

outcome (Hohns, 1979). To qualify as knowledgeable, the attorney should have both experience in the construction industry and familiarity with the resolution format, whether it be litigation, arbitration, or some other means (Rubin, 1983; Hohns, 1979).

* SELECTION. One problem that has become apparent is the increasing involvement by insurance companies in attorney selection. Often insurance companies reserve the right to select the legal counsel, since their financial assets are at stake. Many people are frustrated with that policy because the priorities of the insurance company might not correspond with those of the policy holder. For instance, Mr. Gerald Beaumont prefers to self-insure because it allows him both to select the counsel and determine strategy. This selection is especially important when a quick and efficient settlement is desired (Campbell, 1986). Additionally, there are advantages and disadvantages to the size of the law firm that is chosen. Generally, larger firms have greater assets that can be applied to any case; however, smaller firms offer more personalized attention (Rubin, 1983).

2.3.2 The Legal System. Many members of the construction industry are highly dissatisfied with the legal avenues available to them. The courts are becoming increasingly overcrowded, resulting in extensive delays before trial dates. Furthermore, many parties within construction have realized the frustration of

the tremendous costs involved in litigation. As construction attorney Mr. Donald Ostrower pointed out, "... it costs as much to defend a winning lawsuit as a losing suit" (Consulting Specifying Engineer, 1987). Even the alternatives to the courts are becoming costly, slow, and complex. Arbitration, which was established as an expedited avenue for a decision that did not necessarily require legal counsel, now is so formal that a skillful attorney is considered a key to winning (Hohns, 1979). Finally, the easy access to the legal system has lead to increased abuse by frivolous suits (Sweet, 1985). Not only do such cases require successful defense in court, but a second case is usually necessary for the defendant to recover costs and damages (Parks, 1986).

2.4 The Use of Legal Services. Faced with an increasing number of disputes that potentially jeopardize insurance and bonding, construction professionals have been forced to defend themselves. This section addresses some of the methods used to resolve these disputes and the other services that are used in this defense.

2.4.1 The Volume of Disputes. Statistics regarding the number of disputes in the construction industry are difficult to obtain. Regional reporters that include the outcome of court cases generally only cover appellate and higher rulings. Therefore, any cases decided at the trial court level are not readily available. The outcomes of arbitrations, likewise, are not available publicly. Surveys of industry members become of the best vehicle to obtain an

idea of the volume of disputes. Although these surveys focus on individual segments of the industry and do not routinely address the broader perspective, they do provide a barometer of the issue. Two surveys, with a total sample size of greater than 2500, indicate that since the early 1980s, an average of 40 percent of the design firms can expect one claim each year (Godfrey, 1986; Rubin, 1987). Another author reports a 330 percent increase in the number of disputes in the design field in the last ten years (Franklin, 1986). This frequency compares favorably with a 1981 survey of utility contractors showing an average of one claim annually for the past five years (Hinze, 1981). Although these figures do not give a clear picture of the entire industry, they do show the magnitude of the issue.

2.4.2 Method of Dispute Resolution. Once a dispute has become inevitable, the parties have routinely taken the issue to trial. However, the overcrowding of the courts with other cases have protracted the process to unreasonable lengths. Therefore, many construction professionals have resorted to Alternative Dispute Resolution (ADR) techniques to decide their disputes.

The goal of any dispute resolution method is to settle the dispute on the basis of business factors rather than legal reasons (Franklin, 1986). If the legal issues predominate, the dispute should be heard in a court of law. The following are the primary methods used in ADR (DPIC, 1988):

Arbitration
Mediation/Arbitration
Summary Jury Trial
Rent-a-Judge

Mediation
Mini-trials
Pre-litigation Panel

Arbitration has rapidly become the method of choice among construction disputants. Over half of the current construction contracts contain clauses calling for arbitration under the supervision of the American Arbitration Association (AAA) (Hohns, 1979; Rubin, 1983). It has also been officially endorsed and recommended by the Engineers' Joint Council Documents Committee (EJCDC) (Kennedy, 1985). This method of resolution offers many advantages over litigation, including the following:

- Privacy. No public transcript reports the final decision and award of the arbitrator.
- Informality. Each arbitrator has a large degree of freedom in choosing the procedures that will be followed, in stark contrast to a procedurally intensive trial. One example of this flexibility is that the formal rules of evidence are generally not required.
- Expertise. The arbitrators are most often chosen to preside over a specific case based on their individual expertise in the field of the dispute. Unlike a judge or jury, who may not have any background in the issue, the arbitrators are intended to be knowledgeable fact-finders.

- Convenience. Unlike a court case, in which scheduling a trial date often takes years, arbitration allows much greater flexibility in scheduling the hearings, both in the dates and the location selected.

- Cost. Originally, arbitration was intended to be a low cost method of resolution that would not require the use of legal counsel. Each disputant was expected to stand up and present the case, with the arbitrator asking questions to clarify any issues that arose. There was very little need for the advocacy role of the trial attorney; therefore, the parties realized tremendous cost savings. Additional savings were realized by resolving the issue more quickly than in the court room. More about both of these issues will be discussed later in this section.

- Time. The aspects of the knowledgeable fact-finder, less formal procedures, and to a lesser degree the other advantages, originally combined to drastically reduce the time required to determine the outcome of the dispute. Not only were both parties required to spend less money resolving the issue, but they could "get back to work" and leave the dispute behind them (Greenstreet, 1984).

However, more recently arbitration has come under fire. Two of the most beneficial aspects of the process, cost and time, have been diluted. Although arbitration is still considerably quicker than litigation which can take years, it is no longer the quick and easy

procedure it once was. The average amount of time between filing a demand for arbitration until the award was rendered was 207 days in 1985. Likewise, the costs of filing a demand for arbitration, the fees for arbitrators, and the requirement for legal representation have become significant, although they still are less than those required for a full trial (Lunch, 1986).

Many insurance companies representing potential disputants have expressed resistance to the use of arbitration. Specifically, DPIC policy prohibits its clients from entering into a contract that requires mandatory arbitration. They prefer to see it agreed to only after a dispute has arisen and cite the following reasons:

- It involves no specific provision for discovery. DPIC sees discovery as a fundamental vehicle for determining the validity behind any claim against a policy.
- It includes no provision for joinder of a third party. An arbitrator is serving at the request of the disputants and has no legal authority to require other parties to participate. Therefore, multiple arbitrations may be required to arrive at the same result as a single trial in which all involved parties are represented.
- It is not necessarily less expensive or quicker than litigation. In some cases, arbitration can become drawn out, and costs may increase correspondingly, possibly exceeding those of a trial.

- There is no provision for appeal. Most arbitration provisions do not allow for appeal of the decision. If the decision is appealed, courts are very reluctant to overturn the arbitrator's decision unless there is evidence of unfair treatment (DPIC, 1985).

Other negative possibilities of arbitration include the lack of a win/lose decision; varying procedural rules, especially concerning evidence; no binding precedents; and no mandatory explanation of the award (Greenstreet, 1984; Kennedy, 1985).

The surveys of designers and contractors about their preferred method of resolution produce mixed results. Many designers seem to be disenchanted with arbitration. A 1979 American Society of Civil Engineers (ASCE) survey of this topic reported that over half of those surveyed "disfavored" litigation and arbitration, and 77 percent favored review boards, as shown in the following table:

<u>Procedure</u>	<u>% Favored</u>	<u>% Disfavored</u>	<u>No Opinion</u>
Litigation	25	61	18
Arbitration	21	54	25
Review Boards	77	9	14
Mediation/ arbitration	49	10	41

A similar national survey of utility contractors shows that they still prefer arbitration (Hinze, 1981):

<u>Procedure</u>	<u>% Used</u>	<u>% Preferred</u>
Litigation	24	9
Arbitration	20	41
Negotiation	56	50

2.4.3 Use of Legal Counsel. When and how to use legal counsel is an often perplexing question for many construction professionals. The legal community indicates that in the long term, a construction client who keeps an attorney up-to-date on projects spends less time and money on legal counsel than one who only calls an attorney when a serious problem surfaces (AIA, 1988). However, not every question must be brought to an attorney for review. Most problems deal with technical rather than legal interpretations and rarely require review by counsel (AIA, 1988). Utility contractors have been found to consult with attorneys on an average of five different issues during the course of a normal year (Hinze, 1981).

Periodic review of written agreements and procedures clearly helps construction professionals avoid litigation (Moore, 1985). However, this review does not have to be done by an attorney, since most insurance companies have the requisite expertise to identify potential problem areas and can do so at a significant savings (DPIC, 1985). Another recommended means of obtaining inexpensive legal review is through the use of standardized contract general provisions. The forms issued by AIA, EJCDC, and the Associated General Contractors (AGC), to name a few, all have been carefully scrutinized before being published, and many have been tested in court cases. There appears to be a call for even greater use of standardized formats. One survey showed that 90+ percent of utility contractors favor greater use of such forms (Hinze, 1981).

2.5 Avoiding Disputes. Ultimately, the definition of a successful project is one that is "completed with a minimum of delays and claims, good workmanship, and a final cost approximating the original contract figure" (Goldbloom, 1982). A rule of thumb concerning construction is that "What is good for the project is good for the parties involved in the project" (Tomacetti, 1987). Since disputes often cause delays, cost overruns, and poor morale on the project, they should be avoided whenever possible. To help professionals avoid these disputes, several different techniques have been devised. Those techniques are presented in this section in four basic categories: policies, legal tactics, communication, and people.

2.5.1 Policies. Many experts see the establishment of adequate policies in key areas as a fundamental means of minimizing exposure to a claim. The policies most often mentioned are outlined below:

* **DOCUMENTATION.** Adequate documentation is important for two reasons. First, it provides clear evidence of what has transpired if a dispute arises. Second, it helps to minimize disputes by providing a much clearer view of the issue, thus promoting resolution (Sweet, 1985; Goldbloom, 1982; DPIC, 1988; Franklin, 1986; Firmage, 1980; Progressive Architect, 1986).

* **QUALITY CONTROL.** To quote Mr. Edgar L. Galson, "The increasing threat of litigation is a powerful stimulus for the avoidance of

error" (Galson, 1985). A reduction in the number of errors in either the design or the construction of a project is clearly a means to reduce the possibility of a dispute. Emphasis has been increasing on improving quality control procedures at all levels, from the initial concept through project turn-over to the owner, including careful planning and review of all phases (Marschall, 1982; Galson, 1985; Progressive Architect, 1986; Nigro, 1982). Furthermore, many organizations, such as the American Society of Civil Engineers (ASCE) and AIA, have instituted "peer review" programs to develop more uniform quality control procedures across the industry (Consulting Specifying Engineer, 1987). However, the connection between a design error and a dispute has not been firmly made. One review of 60 claims against designers showed that only 1/6 of the claims resulted from such an error (Consulting Specifying Engineer, 1987).

* FIELD REVIEW. One service for designers that was initially eliminated to reduce exposure to claims, is now advocated for the very same reason. "Field review," formerly called "on-site inspection," is now seen as critical to ensuring that the intent of the design is being followed in the field. The courts have negatively viewed failure to provide such review during construction; therefore, inclusion of a review is firmly advocated (DPIC, 1985; Walter, 1987).

* **TIMELY RESOLUTION.** All parties acknowledge that during the course of construction of virtually any project, differences of opinion arise. During these situations, the parties should "keep the job moving while the difference is being resolved and prevent the situation from getting out of control" (Goldbloom, 1982). Clearly, "claims have a tendency to escalate with time," and prompt attention to requests for additional time or compensation helps to prevent disputes (Rubin, 1983).

* **FINANCIAL ASSETS.** Since the likelihood of a dispute has been clearly linked to the financial position of an owner, a policy to conduct a tactful credit check of any potential client is wise. This policy applies equally to both contractors and designers (DPIC, 1987; Cohen, 1987).

* **CERTIFICATES OF INSURANCE.** To avoid accepting direct liability for subcontractors and consultants, construction professionals should require proof that they have adequate insurance coverage. This proof can easily be obtained through a copy of the subcontractor's certificate of insurance, and notification can be required of the policy's cancellation (DPIC, 1985; Rubin, 1983).

* **"SUBCONTRACTING".** Another method of minimizing exposure is avoiding "subcontracting" for services whenever possible. The alternative is to have the owner contract directly with another party for the service. This policy keeps the prime contractor or

lead designer out of disputes solely between the owner and the subcontractor, but it increases the scope of the owner's project administration (Cohen, 1987; Walter, 1987).

* **MOONLIGHTING.** The prohibition of moonlighting applies more directly to designers than contractors. Because of the court's "deep pockets" theory, a firm can easily be enjoined into a dispute involving a moonlighting employee. A policy against this behavior makes a connection between the firm and the individual more difficult to make in the event of a claim (DPIC, 1985).

2.5.2 Legal Techniques. Many experts advocate differing techniques for avoiding legal liabilities. These approaches include the following:

* **INDEMNIFICATION/EXCULPATORY CLAUSES.** One technique for avoiding the legal consequences of a dispute, especially for the drafting party, is to require the other party to indemnify it from any disputes arising out of the contract. Other variations of this approach include "hold harmless" and "no damage for delay" clauses. When used to avoid reasonable liabilities of doing business, such onerous clauses have been either ruled unenforceable or construed extremely narrowly by the courts. However, they have been used effectively to safeguard the designer from liability claims resulting from the owner's reuse of drawings and specifications. Additionally, many insurance policies expressly exclude contracts with general indemnification clauses (DPIC, 1985; Cohen, 1987; Firmage, 1980; Morton, 1983; Progressive Architect, 1986; Walter, 1987).

* WORD SELECTION. Perhaps the most widely known vehicle for reducing exposure to disputes is the careful selection of words with a view toward their legal interpretations. Careful word selection has lead to a change in the vocabulary, at least on the contractual level, in the industry. Some examples of the words or phrases that have been replaced by more precise legal terms include the following (DPIC, 1985; DPIC, 1988; Walter, 1987):

<u>Former Industry Term</u>	<u>Legal Replacement</u>
Cost Estimate	Opinion of probable construction cost
Approved	No exceptions noted
Inspection	Field review
Supervise/Inspect	Observe

* LIABILITY LIMITS. Another of the popular contract clauses to reduce a designer's exposure to claims is the liability limitation. This clause allocates risk according to the direct financial involvement by a party. Specifically, it limits the consequential or less direct damages to some pre-established level, the limits of which are tighter than the "reasonably foreseeable" rule. This technique has been used by designers to limit their liability on the project to the amount of their fee, but it is being rejected by some courts (DPIC, 1985; DPIC, 1988; Sweet, 1985; Franklin, 1987).

2.5.3 Communications Issues. Professor Robert H. Woodworth lists extensive communication as one of the seven "conditions aiding productive negotiations" (Woodworth, 1980). Mr. Joseph Goldbloom

states that keeping the lines of communication open is a must for assuring a successful project (Goldbloom, 1982). Many other experts agree that one of the surest ways to avoid disputes is to improve the communication, both written and verbal, on a project. Some of the most often cited ways to improve communications are listed below.

* WRITTEN CONTRACT. One often violated, basic principle in the construction industry is to put any contract in writing. Written contracts provide all parties with a better understanding of each other's rights and duties. The contract also serves to allocate risks and establish rules (DPIC, 1987; DPIC, 1985). This requirement also extends to other agreements that modify or clarify the rights and obligations under the contract. Ideally, the "well written and carefully negotiated contract ... [will] develop a clear understanding ... and ... eliminate the need to have that understanding sorted out in a court of law" (DPIC, 1985).

* CLEAR SCOPE OF WORK. More specific than the need for a written agreement is the need to clearly define the scope of services covered. The contract should specify exactly what services are included and excluded for each party involved (Kelly, 1975; Sweet, 1985; Tomacetti, 1987).

* EDUCATE THE OWNER. In many instances, the owner in a project is not familiar with the construction process. In such cases, the construction professionals must educate the owner at the outset of the project. This education may routinely include an explanation of what the contractor and designer can and can not do, the potential problem areas, the inexact nature of construction, and the procedures used to resolve disagreements. The time invested before a problem emerges will yield significant benefits if a problem arises (DPIC, 1987; DPIC, 1988; Tomacetti, 1987).

2.5.4 Human Factors.

One of the determining factors in quality construction is unpredictable; this is the human factor. The design of quality ... and the particular method used to obtain it, result from the decisions of individuals (Goldbloom, 1982).

People are the heart of the construction process and can be the source and solution to nearly every claim. Therefore, hiring, training, and retaining quality staff can be the best protection against a dispute (Morton, 1983). The AIA Director of Administrative Services, Mr. Fred H. Parker, cites poorly trained personnel as the leading cause for quality problems in designs (Cohen, 1987). Once a potential problem arises, the stress of resolving the issue, especially while the project is in progress, normally hinders both the decision-making and communication processes (DPIC, 1988). A failure to understand the human aspects

involved in resolving these problems can lead to polarized positions (Fisher, 1981). Often parties become defensive and adversarial and ultimately end up in a dispute. "An often ignored technique to avoid claims is the cultivation of a good client relationship" (Sweet, 1985).

CHAPTER 3 - METHODOLOGY

3.1 Objective of the Research. The objective of this research is to gather information regarding both the conditions that precipitate disputes, as well as the factors that have successfully reduced their frequency in the construction process.

3.2 Research Method. Most previous studies on this topic fall into three general categories: statistical studies, individual opinions, and panel discussions. The rigorous statistical approach often yields excellent factual data; however, the large sample sizes depersonalize and limit the flexibility of the individual responses. This inflexibility makes measurement of relatively intangible but critical areas, such as expectations and perceptions difficult. For example, the wording of the written survey can drastically influence the responses. An article or paper written by an individual, on the other hand, reflects only that author's attitudes and opinions, and does not represent the broader view of the entire industry. Finally, panel discussions are limited by the difficulty in scheduling a convenient time for the multiple parties to meet. Furthermore, the scope of the information is constrained because panelists must wait while the other individuals have an opportunity to respond to each question, and each response influences the other panelist's perceptions and, therefore, colors their answers.

The use of interviews for gathering information is an attempt to merge these aforementioned techniques. Interviews give the interviewer far greater flexibility in pursuing detailed responses and adapting questions to the differing situations and specialties of the respondents than the written survey. The limited number of respondents, however, does not have the statistical significance of a survey with a large sample size. Interviews also require a much greater investment of time per response by the researcher than the mailed, written survey. On the other hand, multiple interviews allow for a greater number of responses than either the individual opinion or panel discussion. This facilitates the acquisition of opinions and perceptions that more accurately represent the industry as a whole. This process incorporates differing views, similar to a panel discussion, without the scope and time limitations. Therefore, a series of individual interviews was seen as an effective and somewhat unique method to gather the required information.

3.3 Coverage. In order to ensure that the responses to the interviews could be reasonably analyzed, two limitations were established on the scope of the coverage. First, all respondents were located in the Puget Sound area. This restriction permitted all interviews to be conducted by a single interviewer, thus discounting variances in interviewer style and personality. Also, this limitation helped to reduce differing regional influences. The second restriction was to exclude parties

involved primarily in residential construction. This decision was intended to keep the information unbiased by the more personal and emotionally charged problems of home building.

3.4 Interviewee Selection. In order to provide a broad spectrum of differing views, interviewees were chosen from three of the four parties generally involved in legal disputes. The parties included the construction contractor, the designer, and the attorney. The fourth unrepresented party was the owner. The variety of owners with divergent views made selection of representative owners extremely difficult. Finally, interviewing enough owners to obtain representative information would have dramatically increased the effort required in the research without a corresponding increase in the results or conclusions. The researcher decided that questioning the other three parties about owners would address the primary concerns, especially since the designer often represents the owner.

Ten interviews were conducted in each of the three listed categories for a total of 30 responses. This number was intended to represent a broad enough spectrum to encompass the major views of each party without requiring a prohibitive amount of time by the researcher. Additionally, ten interviews in each area would be small enough to still allow for the consideration of individually expressed views.

All interviewees were chosen randomly with no advanced consideration other than the type of work in which they specialized. This one constraint was used to mitigate any influences that were unique to any particular type of construction, other than the previously mentioned exclusion of the residential market. Basically, the interviewees were screened by type of work to ensure that a representative sample of the actual population was covered. For example, the "designer" category included large and small firms, in both the architecture and engineering fields, and multi-discipline and specialty practices. Specific information on the range covered by each category is listed later in this chapter. Two sources were used in identifying potential interviewees, the Puget Sound Book of Lists for 1988 (Puget Sound Business Journal, 1987) and the local telephone book. Initially, ten firms in each category were identified and contacted. Additional interviewees were chosen if those originally selected were unable or unwilling to participate in the research.

3.5 Questionnaire Development. The initial interview documents were developed by the author and reviewed by Associate Professor Jim Hinze of the University of Washington. Because the questions would be asked to three parties with fundamentally different points of view, three separate documents had to be developed. All three questionnaires had the same focus, but most of the questions were adjusted to fit the wording to the particular interviewee. Some issues that applied uniquely to a specific party were only addressed to that party, but

always with the same overall research objective. Finally, the questions were adjusted on the basis of the actual responses received during the initial interviews. Copies of the final questionnaires for each party are included in Appendixes B, C, and D. For the purpose of the interviews and this report, the term "dispute" is used to describe an issue in which at least one of the parties felt it necessary to consult an attorney. Therefore, it encompasses all disagreements in which attorneys are involved in any degree, but excludes those where the parties are able to resolve the disagreement among themselves. Additionally, the respondents were given total flexibility in formulating their answers. "Typical answers" were provided by the interviewer only when it was necessary to clarify the question.

The questionnaires focused on the following key areas:

Legal Climate. Many of the questions dealt with each party's view of the litigation climate in Puget Sound's construction arena. The specific areas discussed included whether the amount of involvement by attorneys is excessive and the identity of the primary sources and reasons for disputes.

Owner. Interviewees were asked who they felt were the best and worst owners and what characteristics influenced their selections.

Attorneys. The crucial relationship with the attorney was examined with a particular emphasis on background, satisfaction, and the benefits and frustrations of using legal counsel.

Use of Legal Services. This topic covered the following questions: when and how often do construction professionals actually consult attorneys; when should they consult; on what do they base their decisions regarding disputes; and what method of dispute resolution is preferred?

Keys to Avoiding Disputes. All respondents were asked what they saw as the best ways to avoid future disputes. This aspect of the report was seen as having the most potential for benefitting the industry as a whole, by both preventing and promoting the resolution of disputes.

3.6 Scheduling Interviews. Once the initial list of potential interviewees had been compiled, the researcher set out to establish initial contact with the firms by telephone. After the purpose of the call was first explained to the receptionist, a point of contact within the firm was requested. This exchange proved to be critical in determining whether an interview would be scheduled successfully. If the receptionist was able to provide an individual's name, the possibility of setting up an interview increased dramatically. On the other hand, if the receptionist indicated that he or she would check with potential interviewees and then "get back with" the researcher, the odds of success diminished significantly. In general, however, most firms were willing to participate in the research. Specifically, 12 law firms, 14 construction companies, and 15 design firms were contacted to schedule the required ten interviews in each profession.

Once the firm had identified its appropriate representative, that person was contacted by telephone to introduce the author, explain the research, and schedule an interview. The study was described as a qualitative study on construction disputes with the purpose of identifying potential errors in perceptions between parties and to develop a series of "keys" for avoiding disputes. The author explained that the research was being conducted in conjunction with a master's degree project in the Construction Engineering and Management Program of the University of Washington's Department of Civil Engineering. The first of the 30 interviews was conducted on July 28th, and the final one was completed on September 30, 1988. For July and the first three weeks in August, the author was limited to a single 8:00 AM or earlier appointment per day. The five-week period from late August through September was devoted exclusively to conducting interviews, which permitted maximum scheduling flexibility. The most interviews conducted in a single day was four. A summary of the final respondents in each category follow:

Contractors. The term contractors is used in this report to refer to construction contractors involved in project construction. If no further clarification is provided with the term, it refers generically to all tiers in the contractor organization. The selected contracting firms represented nearly 500 years of experience and over \$400 million in 1987 contracted volume. They

included general or prime contractors and subcontractors who build high rises, industrial facilities, highways, bridges, office parks, educational facilities, and mechanical and electrical projects.

Designers. The term designers is used to describe all parties involved in the design process, except the owner and the contractors. The respondents in this report included both lead designers and consultants. They had a combined experience of 365 years with 1987 annual billings of over \$185 million. Large multi-disciplined firms, small and medium firms specializing in specific areas of architecture or engineering, and geotechnical consultants were represented. Their projects ranged from high rise office buildings to sewage treatment plants, from industrial facilities to schools, and from tunnels to bridges.

Attorneys. Only lawyers who indicated that they practiced in the construction field were chosen for interviewing. The firms selected ranged from the largest ones with more than 100 attorneys to single person practices. Some represented primarily one specific party in the process, such as prime contractors or subcontractors, while others served the entire range of possible clients. Construction accounted for at least 10 percent of each firm's total case load, with most firms specializing in construction law. The firms represented nearly 350 years of experience.

3.7 Conducting the Interviews. Each meeting was held at the interviewee's office, with the exception of two that were conducted over the lunch hour. The actual interviews ranged in duration from 30 minutes, when the interviewee had a following appointment, to 2 hours. The average duration for the interviews with contractors, designers, and attorneys were 50, 65, and 80 minutes, respectively. Including all the preliminary contacts by telephone, transportation to and from the meeting places, and the actual interviews themselves, an average of 3 1/2 hours were required for each interview. Many of those interviewed expressed interest in the research; five contractors, five designers, and four attorneys requested copies of the final report. Finally, each individual was assured at the outset of the interview that his or her answers would be kept confidential. Therefore, individual responses in the report will not be attributed to any specific respondent. This decision was made to ensure candor in the respondent's answers, especially in the discussions of owners and attitudes regarding disputes.

3.8 Data Analysis. The individual responses were reviewed to identify the areas that merited inclusion in the report. This analysis was done in a tabular format, as seen in Chapter Four. Rigorous statistical methods could not be used to reduce the data because of the relatively small sample size. The background questions in each interview were used primarily to ensure that the approach covered a spectrum of respondents. The results included in Chapter Four do not tie any of the responses to any respondent's background to avoid compromising the confidentiality.

CHAPTER 4 - RESULTS

The results of the 30 interviews are presented in tabular format in this chapter. The responses to all the questions were analyzed, but only those meriting inclusion follow. As discussed in Chapter Three, a priority was placed on allowing the interviewees the maximum flexibility in responding. Therefore, typical answers to the questions were not provided except when absolutely necessary to clarify the nature of the question. To minimize bias in any of the responses, the author used the actual words of the respondents when categorizing their responses. Therefore, the answers included in this chapter reflect those of the interviewees to the greatest degree possible. The answers are not to be regarded as correct, but as the perceptions of professionals in the industry, because those professionals act on the basis of their perceptions of reality, not necessarily according to reality. Finally, in order to preserve total anonymity of the respondents, none of the background information has been included in conjunction with the responses.

This chapter is divided into five sections:

- The litigation climate
- Owners
- Attorneys and the legal system
- The use of the legal system
- Keys to avoiding disputes.

4.1 The Litigation Climate. The results in this section were intended to provide a broad perspective of the disputes climate in the Puget Sound area. This perspective provides a suitable background for the sections that follow.

4.1.1 Involvement by Attorneys. All three parties were asked whether attorneys were too involved in the construction industry. This question was intended to determine their attitudes about legal counsel. The results are shown in Table 1. The vast majority of the respondents (24 of 30) felt that attorneys were too involved at some level in the construction industry. Of the respondents, 16 did not qualify their answers, six thought attorneys were too involved in disputes but not enough in prevention, and two attorneys felt too many incompetent attorneys were involved and not enough competent ones. Eight of ten contractors and six of ten designers accounted for 14 of the 16 unqualified answers. Of those who specified too much involvement at some level, six of the eight were lawyers. Finally, the six interviewees who indicated that attorneys were not overly involved were evenly distributed among the attorneys, contractors, and designers.

Table 1.

Question: Is there too much involvement by attorneys in the construction industry?

Response	Attorneys	Contractors	Designers	Total
Yes (unqualified)	2	8	6	16
No (unqualified)	2	2	2	6
Yes, in disputes/ No, in prevention	4	0	2	6
Yes, with incompetent attorneys/ No, with competent attorneys	2	0	0	2
Total	10	10	10	30

4.1.2 Primary Reasons for the Litigation Climate. An effort was made to identify the predominant "big picture" reason for the high number of disputes in construction. Several possible answers were provided by the interviewer to illustrate the intent of the question; however, the respondents were allowed total freedom in answering. As illustrated in Table 2, 13 of 30 interviewees saw our litigious society, which includes the construction industry, as the primary reason. Over half of those selecting this option (seven of 13) were designers. The next most popular option was "the nature of the industry," chosen by eight. The respondents indicated that this option included the multiple parties in any project, and the inexact nature of both the design and construction of the project. The next two possible reasons, chosen by three

respondents each, were economic considerations and the low bidder system. Those selecting these options indicated that finances influence a number of disputes. One note of particular interest: the answers to this question represented remarkable agreement between the contractors and the attorneys. Only a single answer differed between these two parties.

Table 2.

Question: What is the primary reason for the high number of disputes in the construction industry?

Response	Attorneys	Contractors	Designers	Total
Society	3	3	7	13
Nature of the Industry	4	4	0	8
Economic Considerations	1	1	1	3
"Low Bidder" System	1	2	0	3
No Opinion	1	0	1	2
Too Many Attorneys	0	0	1	1
Total	10	10	10	30

4.1.3 Primary Sources of Disputes. The interviewees were asked to identify the situations in individual projects that are the most likely to generate a dispute. Typical answers were provided to the interviewees to ensure that they understood the distinction between this question and the previous one, which dealt with the reasons for disputes. However, they were allowed to choose any of those options provided or to provide another answer. As indicated

in Table 3, changed conditions was cited by 17 of the 30 interviewees. The numbers listed in parentheses are a more specific breakdown of the general answers. In this case, of the five contractors who cited changed conditions, three attributed disputes to defective specifications, one to subsurface problems, and the remaining person did not specify. Payment issues were seen as the second most common source of disputes; nine respondents selected this category. Several respondents indicated that private owners were more likely to be involved in disputes over payment, while public sector owners were more likely to have disputes over changed conditions, time and delay issues, and bidding errors. All three parties were in close agreement about the primary sources of disputes.

Table 3.

Question: What is the primary source of disputes in construction?

Response	Attorneys	Contractors	Designers	Total
Changed Conditions	6	5	6	17
a) Defective Specs	(5)	(3)	(2)	(10)
b) Subsurface Probs	(1)	(1)	(3)	(5)
Payment Issues	2	4	3	9
Time and Delays	2	0	0	2
Errors in the Bid	0	0	1	1
Lack of Communication	0	1	0	1
Totals	10	10	10	30

4.1.4 Competitive Contracts. The respondents were asked about the percentage of their disputes that occurred under competitively bid contracts. This category included competitively bid subcontracts. Table 4 shows that 27 of the possible 30 interviewees felt that over 50 percent of their disputes occurred under competitive bid contracts. More significantly, 17 of those 27 felt that 75 percent or more of the disputes were involved in competitive contracts. The contractors felt more strongly about this issue than the other two parties; eight of the ten contractors fell into the 75 percent or more category. Although no firm figures were available to indicate the percentage of contracts that are competitively bid, a safe assumption is that at least 75 percent fall into this category.

Table 4.

Question: What percentage of disputes occur under competitively bid contracts (including subcontracts)?

Response	Attorneys	Contractors	Designers	Total
75-100%	3	8	6	17
50-75%	5	1	4	10
25-50%	1	1	0	2
0-25%	1	0	0	1
Total	10	10	10	30

4.1.5 Contract Payment Form. The interviewees were asked whether the payment form of the contract (i.e., firm-fixed price, cost plus, or unit price) have an effect on the frequency of disputes.

The results to this question are included in Table 5. More than half of the respondents (17 of 30) did not feel that the form had any effect. Eleven respondents said that firm-fixed price contracts, whether competitively bid or negotiated, were involved in more disputes. Once again, the three different parties agreed relatively closely on this issue, although the designers felt slightly more strongly that the contract form has no effect.

Table 5.

Question: What contract payment form leads to more disputes?

Response	Attorneys	Contractors	Designers	Total
Form has No Effect	4	6	7	17
Firm Fixed Price (Bid or Negotiated)	4	4	3	11
Cost Plus Fee	1	0	0	1
Unit Price	1	0	0	1
Total	10	10	10	30

4.2 Attorneys and the Legal System. This section focused on all parties' views of attorneys and the legal system. Several of the questions were only addressed to the contractors and the designers because the answers were related to their opinions of the attorneys that they had been involved with as clients. For the purposes of this report, the term "legal system" is used to encompass all areas covered by laws or the procedures involving attorneys.

4.2.1 Attorney Representation. The interviewees were asked about the type of attorney that represented each of the construction professionals in resolving legal matters. The term "law firm" implied both more than one lawyer and multiple areas of expertise. The term "construction expertise" meant that the respondent felt that the attorney was well versed in construction matters, but there was no fixed definition such as in paragraph 4.2.2. When answering this question, 16 of the 20 interviewees indicated that their legal counsel had expertise in construction, as seen in Table 6. Only two companies maintaining a relationship with an attorney did not insist that their lawyers have such expertise. Eight of the 20 respondents used the services of a law firm. Another four companies had in-house counsel, all of whom had construction expertise.

Table 6.

Question: What type of attorney represents your firm?

Response	Contractors	Designers	Total
Law firm with construct expertise	4	3	7
Single attorney with construct expertise	3	2	5
"In-house" counsel with construct expertise	1	3	4
No continuous relations with an attorney	0	2	2
Law firm with general practice	1	0	1
Single attorney with general practice	1	0	1
Total	10	10	20

4.2.2 Attorney's Background. Each respondent was asked about the importance of a formal background in construction to the practice of law in the construction field. A background was defined as one of the following: formal education as either an engineer, architect, or construction manager; expertise in the construction industry before law practice; or three or more years of experience in construction law. Table 7 shows that 23 of the 30 interviewees indicated that such a background was either important (ten) or very important (13). Five respondents did not feel the background was

required. Finally, one attorney felt such a background was essential while another recommended against it. Note that all the attorneys interviewed represented themselves as construction attorneys, and five of them had backgrounds as defined. Only one of the attorneys answered in contradiction to his own individual background. This attorney, without a background in construction, felt that such a background is an important factor in the practice. Additionally, at some point in the interview 13 of the 30 respondents cited the need to educate attorneys in the basics of construction as a significant problem.

Table 7.

Question: How important is a background in construction to the practicing law in the construction industry?

Response	Attorneys	Contractors	Designers	Total
Essential	1	0	0	1
Very important	6	4	3	13
Important	0	4	6	10
Not required	2	2	1	5
Not recommended	1	0	0	1
Total	10	10	10	30

4.2.3 Attorney's Priorities. This question addressed the degree of confidence that clients had that their attorneys kept their best interests in mind. Table 8 shows that 15 of the 20 interviewees felt their best interests were the first priority of their counsel,

although two indicated that they had some doubt on this issue. The remaining five respondents felt that their attorneys had higher priorities in their cases than the client's interests. However, three of these five were not convinced that this was the case.

Table 8.

Question: Does your attorney always have your best interests in mind?

Response	Contractors	Designers	Total
Yes (unqualified)	7	5	12
Yes, qualified	1	2	3
No (unqualified)	1	1	2
No, qualified	1	2	3
Total	10	10	20

4.2.4 Expense of Legal Counsel. The interviewees were asked whether the expense of obtaining legal counsel is worthwhile. The results are shown in Table 9. Again, 15 of the 20 respondents said they got their money's worth when they consulted with an attorney. However, seven of the 15 felt lawyers were overpriced. The remaining five interviewees felt that they did not get full value for their money when using an attorney's services.

Table 9.

Question: Do you get your "money's worth" when consulting your attorney?

Response	Contractors	Designers	Total
Yes (unqualified)	5	3	8
Yes, but overpriced	3	4	7
No (unqualified)	2	3	5
Total	10	10	20

4.2.5 Benefits of an Attorney. This section was developed to identify the biggest advantages of utilizing an attorney's services. The responses to this question are included in Table 10. No single answer emerged as predominant. Eight of 30 said that an attorney provided them access to the legal system and the judgments that went with it. Another six respondents preferred to use an attorney to protect their interests in a preventive context. This area coincided closely with the five interviewees who saw attorneys primarily as vehicles to avoid court. Another group of six respondents used legal counsel to provide legal strategy. The most striking difference of opinion was in the attorney's role as an objective problem solver. Three attorneys saw this as the most beneficial aspect of their work, yet this view was not shared by any of the contractors or designers.

Table 10.

Question: What do you consider the biggest advantage or benefit of consulting with an attorney?

Response	Attorneys	Contractors	Designers	Total
Access to the legal system	2	2	4	8
Protect my interests	1	2	3	6
Legal strategy	3	2	1	6
Avoid disputes and court	1	3	1	5
Objective problem solver	3	0	0	3
None	0	1	1	2
Total	10	10	10	30

4.2.6 Disadvantages of an Attorney. In contrast to the question addressed in the previous section, this question focused on the biggest disadvantage of using an attorney or the legal system. The lack of a timely resolution, chosen by ten respondents, was the primary concern as shown in Table 11. Second, chosen by seven respondents, was that attorneys can hinder communication between parties and polarize positions. The expense of the overall process drew six responses, as did the cost of educating attorneys in the basics of construction. The most notable factor in the results is that nine of the ten attorneys opted for either the time or expense options. The contractors and designers, on the other hand, indicated a preference for the polarization of communication (seven) and the cost of educating attorneys in construction (six).

Table 11.

Question: What do you see as the biggest disadvantage or frustration when consulting with an attorney and the legal system?

Response	Attorneys	Contractors	Designers	Total
The process is too slow	6	2	2	10
They polarize positions and hinder communication	0	2	5	7
The process is too expensive	3	2	1	6
The cost of educating them in construction	0	4	2	6
Can not force action	1	0	0	1
Total	10	10	10	30

4.3 Owners. As discussed in Chapter 3, this study could not realistically characterize owners by interviewing them directly. Therefore, the other three parties were asked a series of questions to determine which owners were the best and worst and to find out what characterized their selection.

4.3.1 Best Owners. This section addressed the identity of the owner with whom the parties had the best experience. Since attorneys generally only see the projects with problems and not those that proceed smoothly, they were not included as respondents to this question. Over half (12 of 20) of the construction professionals preferred working for private owners, as shown in

Table 12. Another four would rather work in the public sector, and within this category two of the contractors opted for the federal level and one designer each opted for the state and local levels. Finally, four other interviewees said that the best owner can not be classified as public or private, that the most important factor was the competence of their staff. The competence of the staff proved to be slightly more important to the designers than to the contractors.

Table 12.

Question: What type of owner is the best?

Response	Contractors	Designers	Total
Private	7	5	12
Public	2	2	4
a) Federal	(2)	(0)	(2)
b) State	(0)	(1)	(1)
c) Local	(0)	(1)	(1)
Not public or private, but those with a competent staff	1	3	4
Total	10	10	20

4.3.2 Best Owner Characteristics. For further insight into the category of best owners, each respondent was asked to identify the characteristics of the best owners. The results are included in Table 13. The responses were spread over a relatively narrow range. The most popular answer, responsive to problems, drew less

than 25 percent of the total (eight of 32). The next most often named characteristic (six responses) covered paying promptly. Experience in the construction field, being part of a construction team, and the opportunity for follow-on work all had four nominations. The contractors' and designers' views of what characterizes the best owners did not agree very closely.

Table 13.

Question: What are the characteristics of the best owners?
(More than one answer accepted.)

Response	Contractors	Designers	Total
Responsive to problems	6	2	8
Pay promptly	2	4	6
Construction experience	2	2	4
"Team player"	3	1	4
Can form long-term relationships	1	3	4
Consistent behavior	2	1	3
Not administratively burdensome	0	2	2
Looks to the intent of the plans and specs	2	0	2
Total	18	15	33

4.3.3 Worst Owners. Contrary to the previous section, the interviewees were asked which owners are the worst. Table 14 indicates who the interviewees saw as the worst owners in this region. Note that attorneys were also asked this question. The

public sector was identified as the worst system by 22 of the 30 respondents. Additionally, the federal government was specified by eight of the 22 answers, while five indicated that the state was the worst. Only two contractors saw private owners as being worse overall, and six interviewees said that the type of owner was overshadowed by the caliber of the staff administering the project.

Table 14.

Question: What type of owner is the worst?

Response	Attorneys	Contractors	Designers	Total
Public	8	8	6	22
a) Federal	(3)	(4)	(1)	(8)
b) State	(3)	(0)	(2)	(5)
Private	2	0	0	2
Not public or private, but those with an incompetent staff	0	2	4	6
Total	10	10	10	30

4.3.4 Worst Owner Characteristics. As was done with the best owners, this question was used to clarify the reasons behind the selection of the worst owners. Table 15 shows that the primary complaint, selected by nine of the 34 respondents, was the bureaucratic nature of these owners. This response was followed closely by inexperience in construction, chosen by eight respondents. Owners who took an adversarial approach to the construction process was selected by five respondents,

while rigid contract enforcement and inability to make decisions each accounted for four answers. The responses of the contractors and designers were in closer agreement than in the best characteristics category.

Table 15.

Question: What are the characteristics of the worst owners?
(More than one answer accepted.)

Response	Attorneys	Contractors	Designers	Total
Highly bureaucratic	1	4	4	9
Inexperienced in const.	2	3	3	8
Adversarial mind-set	1	3	1	5
Rigid enforcement of contract	0	2	2	4
Inability to make decisions	1	3	0	4
Arbitrary decisions	0	1	1	2
Do not pay promptly	1	0	1	2
Total	6	16	12	34

4.4 Use of Legal Counsel. One important question that surfaces in any discussion on the topic of disputes is how much do construction professionals actually utilize legal services? This section of the report addresses this issue and is based on each interviewees actual experiences.

4.4.1 When Attorneys Are Consulted. The contractors and designers were asked about which phase during a project or problem they consulted their attorneys. The attorneys were asked to characterize their typical construction client when addressing the same question. Table 16 reports the results. Over half of the respondents (18 of 30) indicated that they consulted only as a last resort or after the problem had progressed beyond the control of their company staffs. The next most often provided responses were "at the first sign of a legal problem" and "prior to signing the contract," which had four indications each. Note that the contractors responded that they were more likely to seek counsel earlier than the designers.

Table 16.

Question: At what stage in a project do construction clients, both contractors and designers, consult an attorney?

Response	Attorneys	Contractors	Designers	Total
Only as a last resort	1	4	4	9
Beyond control of the company staff	5	0	4	9
1st sign of a legal problem	2	2	0	4
Prior to signing the contract	0	3	1	4
When the need for legal counsel is confirmed	0	1	1	2
At the end of the job	1	0	0	1
Failure to be paid	1	0	0	1
Total	10	10	10	30

Table 17 also shows when construction clients consult with their attorneys. When asked to categorize their clients according to when they sought advice, 90 percent of the attorneys responded that 40 percent or less of their clients sought preventive counsel. Half of the lawyers said that less than 25 percent of their clients tried to prevent a problem before it surfaced.

Table 17.

Question: What percent of your construction clients, including both contractors and designers, fall into the following categories?
(Question only asked to attorneys.)

Response	0-20%	21-40%	41-60%	60-100%
Seek preventive advice	5	4	1	0
Seek advice once a dispute is in progress	1	4	3	2
Seek advice after the dispute is over	4	3	2	1

4.4.2 When do Attorneys Recommend Consultation. The lawyers were then asked when they recommended that their construction clients bring a problem to their attention. Virtually all of the attorneys recommended an initial consultation purely to become familiar with the particular client's business and to review their contracts and procedures. The answers, listed in Table 18, reflect when a client should consult after this initial meeting. The majority (six of ten) felt that the client only needed to consult them when a specific problem emerged that had legal implications. These

individuals did not feel they needed to review individual contracts unless some unusual clauses were included. Three other lawyers felt it was important for them to be informally notified about the status of each contract from signing to "ribbon-cutting." These respondents saw this as the best means to head off problems early and to minimize the time necessary to become familiar with specific issues. Lastly, one attorney thought he should become involved once the client was ignored by the other party in the contract.

Table 18.

Question: After you have reviewed a client's procedures,
when do you recommend they consult with you
again?

Response	Attorneys
At the first sign of a legal problem	6
Prior to signing a contract	3
When they are ignored by another party	1
Total	10

4.4.3 Frequency of Consultations. This section was intended to provide a perspective on how frequently construction professionals sought legal counsel in a typical year. The results contained in Table 19 could not be normalized because of the lack of a consistent factor pertaining to all three parties. The table shows that one third of the respondents (ten of 30) sought legal advice

11-20 times. Those firms who consulted with their attorneys between three and five times accounted for five answers. Both 6-10 and 21-30 consultations each drew four interviewees. No significant deviations were noted between the responses by the three different parties.

Table 19.

Question: How many times during a typical year do construction clients, both contractors and designers, consult an attorney?

Response	Attorneys	Contractors	Designers	Total
0 - 2	0	0	1	1
3 - 5	1	2	2	5
6 - 10	1	1	2	4
11 - 20	4	3	3	10
21 - 30	3	0	1	4
31 - 50	1	1	1	3
51 - 75	0	1	0	1
76 - 100	0	2	0	2
Total	10	10	10	30

4.4.4 Frequency of Disputes. Table 20 lists the interviewees responses regarding the frequency of disputes that each had experienced. The data have not been normalized for the reasons noted in the previous section. Additionally, attorneys were not included in the responses to this question because their answers

may have artificially biased the results. The responses indicated that half the firms were involved in two or fewer disputes in a typical year. Another 25 percent (four interviewees) experienced three or four disputes.

Table 20.

Question: How many disputes does your firm have in a typical year (not necessarily resulting in litigation or arbitration, etc)?

Response	Contractors	Designers	Total
0	3	1	4
1	2	1	3
2	1	2	3
3	1	0	1
4	0	4	4
5	0	0	0
6 - 10	2	0	2
11 - 20	0	1	1
More than 20	1	1	2
Total	10	10	20

Additionally, the attorneys were asked how they felt the frequency of disputes had changed in the last ten years. The results, as shown in Table 21, were that five of the ten interviewees felt there had been a moderate increase in the frequency of disputes. Another two respondents thought the frequency had increased significantly, and only one indicated the increase was slight. The remaining two

lawyers said that they had not perceived any change in the number of construction disputes. None of the attorneys thought that the number of claims had decreased.

Table 21.

Question: How has the frequency of disputes changed in the last ten years?

Response	Attorneys
Increased significantly	2
Increased moderately	5
Increased slightly	1
No change	2
Decreased	0
Total	10

4.4.5 Basis for Decisions. Each disputant faces a decision regarding whether to pursue a dispute or settlement. The decision is based primarily on the principles behind the dispute or economic considerations, including both the cost of obtaining a judgment and the probability of a successful outcome. Table 22 shows that although 11 of the 30 interviewees indicated that they made initial decisions to pursue disputes based on the principles of the issue, they ultimately made their decisions based on economic factors. Another ten respondents said that they used both rationales when making a decision, depending on the circumstances of the specific issue. Economic considerations dominated the process for another eight firms, while only a single interviewee based the decisions primarily on the principle behind the issue.

Table 22.

Question: What does your firm use as the basis for making a decision about whether to pursue formal resolution for a dispute?

Response	Attorneys	Contractors	Designers	Total
Initially principles, ultimately economics	3	3	5	11
Primarily economics	5	1	2	8
Primarily principles	0	1	0	1
Both principles and economics	2	5	3	10
Total	10	10	10	30

4.4.6 Method of Formal Resolution. Once a dispute is inevitable, the parties have a number of resolution forums available to them. This paragraph examines which of the methods is preferred by the different parties. Table 23 lists the result to this question. Arbitration emerged as the most preferred option, chosen by 13 of the 30 respondents. Litigation and mediation each received five votes. The dispute review board option encompasses the traditional forum used by most of the federal agencies and some state departments. In these cases, the board comprises additional members of the governmental organization which rules on the propriety of the contractor's or designer's claim. This category does not include the more recent review board, which includes contractor as well as owner representatives. Note that attorneys definitely favored litigation and arbitration, while five of the contractors preferred arbitration but none opted for the court room. Designers, on the other hand, did not seem to have a clear preference.

Table 23.

Question: What method of formal disputes resolution do you prefer?

Response	Attorneys	Contractors	Designers	Total
Litigation	4	0	1	5
Arbitration	5	5	3	13
Mediation	1	2	2	5
Disputes review board	0	1	1	2
Other	0	1	1	2
None of the available options	0	1	2	3
Total	10	10	10	30

4.4.7 Standard Form Contracts. All interviewees were asked which of the standard form contracts that they prefer to use. Table 24 lists the answers and shows a clear preference for the American Institute of Architects (AIA) forms (12 of 30). Note that of those firms expressing a preference, twice as many selected the AIA documents as any other type. Just under 25 percent of those questioned (seven of 30) said that they had no preference.

Table 24.

Question: What standard contract forms, if any, do you prefer?

Response	Attorneys	Contractors	Designers	Total
American Institute of Architects (AIA)	4	3	5	12
Association of General Contractors (AGC)	3	3	0	6
Engineer's Joint Council (EJC)	0	0	4	4
Own firm's forms	1	0	0	1
None of the above or no opinion	2	4	1	7
Total	10	10	10	30

4.5 Keys to Avoiding Disputes. Since very few construction professionals consciously try to become involved in disputes, the vast majority try with varying degrees of success to avoid them. Table 25 lists the factors that the interviewees found the most successful in this endeavor. The responses were broken down into three categories, people, policy, and communications issues. Nearly 15 percent (16 of 110) of the responses were that a staff that is fair, reasonable, and respectful is a key. The next two most popular responses, nearly 12 percent each (13 responses), were that communication skills and good contract documents were critical for a successful project. A combined response of nearly 20 percent pointed out that firm policies to work through disputes (11 responses) and resolve them in a timely fashion (ten responses) are of primary importance. Finally, ten interviewees mentioned a team atmosphere and another nine saw a staff experienced in

construction as being the keys. The use of the term "competitive work," under policy issues, refers to the form of contracting between the owner and the contractor, not the designer.

Table 25.

Question: What do you feel are the keys to avoiding disputes?
(More than one answer accepted.)

Response	Attorneys	Contractors	Designers	Total
PEOPLE ISSUES	8	17	19	44
Being fair, reasonable and respectful	(3)	(6)	(7)	(16)
Team atmosphere	(2)	(5)	(3)	(10)
Experienced staff	(1)	(2)	(6)	(9)
Avoid adverse relations	(1)	(4)	(3)	(8)
Leadership	(1)	(0)	(0)	(1)
POLICY ISSUES	8	12	14	34
Work through disputes	(2)	(6)	(3)	(11)
Resolve issues timely	(2)	(4)	(4)	(10)
Documentation	(4)	(1)	(3)	(8)
Avoid competitive work	(0)	(1)	(3)	(4)
Effective QC program	(0)	(0)	(1)	(1)
COMMUNICATION ISSUES	11	10	11	32
Communication Skills	(4)	(6)	(3)	(13)
Good contract documents	(6)	(3)	(4)	(13)
Clear scope of work and expectations	(1)	(1)	(4)	(6)
Total	27	39	44	110

CHAPTER 5 - CONCLUSIONS AND RECOMMENDATIONS

As discussed in the first chapter of this report, one of the goals of the research was to promote communication and resolution of disputes before they become formal. This approach would save untold amounts of both financial and personnel assets for use in direct application to construction. The following sections address this aspect of the report.

5.1 Conclusions. The following conclusions were developed directly from the results included in Chapter 4. Where appropriate, the specific tables are cited.

5.1.1 Litigation Climate. Most of the information dealing with the disputes climate in Puget Sound did not lead to any dramatic revelations. This region appears to be somewhat typical in comparison to the national climate. However, the two areas that are different than expected are the effects of competitive contracts and the form of contractual payment on the frequency of disputes.

First, a common perception is that competitive contracting dramatically increases the likelihood of disputes when compared to noncompetitive awards. Some sources feel that such contracts are 80 times more likely to end up in dispute. Since most subcontracts are awarded based on some form of either formal or informal bidding, the majority of contracts have competitive aspects.

In order to support this negative perception of bidding's influence on disputes, at least 90 percent of all disputes should occur under competitive contracts. However, Table 4 does not support this harsh conclusion. Only 75 to 80 percent of the cited disputes occurred under such contracts. While this figure does not offer conclusive evidence contrary to the perception, it does provide a basis to question the extremely negative image of competitive contracting. Since most competitive contracts are awarded by public owners as a matter of policy, possibly the higher number of disputes is influenced by other public owner factors, such as "deep pockets" or inexperienced staff.

Second, another misconception is that "cost plus" contracts are a good technique to avoid contractual disputes. The information in Table 5 does not support this conclusion. Most of the respondents felt that the form of payment had no effect on the frequency of disputes. One interviewee even felt that cost plus contracts involve more disputes than firm-fixed price contracts. Another interviewee said that, although cost plus projects might involve fewer disputes numerically, their disputes are much larger financially. As in competitive contracting, although the results are not sufficient to dispel the previous conception, they should diminish the idea many people have that cost plus contracting is dispute free.

5.1.2 Attorneys and the Legal System. The results provided many insights into how construction professionals view their attorneys and the legal system. Tables 6 and 7 clearly indicate that a construction background is important for an attorney practicing in the field. Furthermore, the majority of the construction clients acknowledge this importance by retaining attorneys with such backgrounds. Additionally, the issue of background emerged again in Table 11, where many of the contractors and designers saw having to educate attorneys in the basics of the industry as a "negative" aspect of dealing with attorneys. Not surprisingly, most of the contractors and designers have faith in their lawyer's loyalty to them as a client; however, there is a strong indication that legal counsel is viewed as overpriced.

A couple of striking differences are apparent in how the different parties view the role of attorneys. Table 10 shows that some attorneys see their roles as one that goes beyond providing legal counsel. Most of the construction professionals, however, see the attorney's role as limited to legal matters. This disparity of views also extends to the disadvantages of seeking legal advice, in Table 11. The legal community sees the cost and time involved in obtaining a judgment as the major disadvantage for construction professionals using the legal system. The construction community, however, views polarized positions, hindered communication, and a

lack of basic understanding of construction as the biggest negatives. This seems to indicate that construction professionals are interested in a quick, low-cost means of resolving their disputes, preferably by negotiation.

5.1.3 Owners. Tables 12 and 13 show the ideal owner from the perspective of the contractors and designers. This owner would understand the inexact nature of the construction process, be responsive to problems, be fair, reasonable, respectful, and pay promptly. Additionally, this owner would be able to focus on the ultimate goal of the completed project, realizing that what is good for the project is good for all parties, and would be capable of becoming a repeat customer. The consensus of opinion is that these characteristics are more likely to be found in private owners.

5.1.4 Use of the Legal System. The information provided in the interviews indicates that the majority of construction professionals are still relying on legal advice as a means of resolving disputes, not preventing them. Tables 16, 17, and 18 show that both designers and contractors avoid involving lawyers until late in the game, after a dispute has arisen. Although there is some movement toward greater use of attorneys in a preventive role, it clearly has not been adopted by the industry as a whole.

Although the dispute and consultation statistics contained in Tables 19 and 20 are not normalized, they may indicate that the Puget Sound area has a slightly greater propensity for disputes than the construction industry nationally. The time that has elapsed since the national surveys were taken could account for some of the difference. In either case, the figures are not conclusive.

Table 22 shows that most disputants are ultimately making settlement decisions on the basis of economic criteria rather than principles. Of course, this does not rule out principled cases in any way, but they are much less frequent. This could reflect the transition in how the business of construction is conducted, as suggested by former AIA president Mr. John Busby.

Finally, there is a definite trend in the industry concerning the preferred method of disputes resolution. First, the industry abandoned litigation as a realistic means of settling many disputes because of its huge legal costs and tremendous delays.

Arbitration, with its knowledgeable fact-finder, then came on the scene and promised quick, efficient, and inexpensive settlements. As that method has become more formal, expensive, and slow over the years, it has begun to lose its following in the construction industry. A trend appears to be emerging toward both mediation and objective review boards. Table 23 shows that attorneys still favor litigation and arbitration. However, the construction

professionals, while still hanging on to arbitration contractually, are dissatisfied with it and are looking elsewhere for a better method. The only other comment about resolution procedures is that both arbitration and mediation are largely seen as "split the baby" options, in which the award generally falls in the middle of the two original positions. Litigation, however, still has many "win-lose" facets.

5.1.5 Keys to Avoiding Disputes. As shown in Table 25, there is a definite trend away from the narrowing scope of services and exculpatory clauses of the early 1980s. These interviews show a resurgence of professional behavior amidst the industry. The vast majority of the keys to avoiding disputes are the "soft" or people related issues. While some critics may dismiss these as mere platitudes, they do reflect the direction of the industry. Tired of resolving issues in court, where "only the lawyers win," construction professionals seem to want to move beyond that to a new stage of reasonableness, characterized by up-front communication and work toward common goals. The days of using legal "gimmicks" to force liability onto another party, to avoid it altogether, or to restrict services seem to be fading. Naturally, this transition will not come easily, but many contractors, designers, and owners seem to understand the value of working together wisely rather than being adversaries.

5.2 Recommendations. The following recommendations are based on the research described in this report:

* ATTORNEY SELECTION. The importance of obtaining the services of a good attorney with a solid background in construction can not be overemphasized. Even if many construction professionals are moving away from using legal means to resolve issues, no party will be able to avoid potential disputes indefinitely. The selection of an attorney should be undertaken carefully, and should include a combination of recommendations from satisfied clients and personal interviews. Each attorney should reflect and understand the priorities of the firm he or she represents. If a firm feels that court is a poor place in which to resolve disputes, it should not retain an attorney who prefers the courtroom setting. Furthermore, each construction professional should invest time up front with his or her attorney to allow the attorney to become familiar with the firm's operation. This "up front" review can yield invaluable dividends in both pointing out exposure and saving time in the event that a dispute does emerge. The saying that "an ounce of prevention is worth a pound of cure" seems to apply to attorneys in construction. Ultimately, the purpose of any relationship with an attorney should be first, to keep the client out of disputes, and second, to protect the client if a dispute arises. In addition, some law firms specialize in all aspects of construction, not only disputes. Some of these firms retain construction engineers and managers on their

staffs and are qualified to provide advice in virtually any area, from labor relations to taxes, from tracking labor statistics to accounting for equipment costs, and from disputes to problem solving.

* POLICIES. Some specific policies appeared to have a profound effect on the frequency of disputes. First, all issues that come up on a project should be resolved quickly. This responsiveness from all parties greatly aids in maintaining good working relations and, ultimately, benefits the project and all parties. Likewise, a firm company policy to NOT become involved in disputes can go a long ways toward keeping the project successful. This policy helps to keep the parties to the project reasonable, communicating, and working toward a solution, rather than letting the mounting stress manifest itself through a breach in dialog and a dispute. Two other policy areas that can help avoid disputes and keep the resources applied directly to the project are a solid quality control (QC) program and a firm rule about documenting any deviations or changes. This documentation both helps to promote understanding between parties, especially in the form of minutes to meetings, but also serves to deter any potential dispute. Finally, if competitive bidding is required, every effort should be made to prequalify bidders to weed out the contractors that are most likely to encounter problems caused by lack of expertise or adversarial mentality.

* PEOPLE. The staff ultimately determines the success or failure of any company. Therefore, as the results in this research indicate, staff should be of the highest possible quality. They then should also be trained in the policies and standards of the company. Finally, every effort should be made to retain these quality people. The training they receive should be in both technical and nontechnical areas, including communication and basic attitudes of courtesy, respect, and reasonableness. If the staff behave professionally, other parties are far more likely to reciprocate.

* COMMUNICATION. Ensuring effective communication is involved in the policies and people issues mentioned previously; however it also merits individual mention. Several critical areas of communication are apparent in the construction process. The most obvious area is the actual contract between the parties. Every effort should be made to clearly point out each parties' rights, risks, and obligations, as well as the rules for dealing with different situations, such as changes. Trying to absolve any party of all liability, or hiding risk in ambiguous clauses, have largely been proven both ineffective and counterproductive. The contract should above all be fair to all parties if disputes are to be avoided. Routine meetings between the different parties to review the status of the project and any outstanding action items are also extremely effective as a communications tool. The emphasis behind this communication should be the overall good of the

project, and the benefit to all the parties should follow. As mentioned above, promptly addressing all issues also immeasurably promotes mutual understanding.

* AVOIDANCE OF HIGH RISK PROJECTS. Some projects have inherently high potential for disputes. Therefore, to minimize disputes the following typical problem areas should be avoided whenever possible:

- Owners who are inexperienced in construction. Their lack of familiarity with the unique nature of the construction process can lead to unrealistic perceptions. This problem can be minimized, however, through extensive education by both the designer and the contractor to bring about realistic expectations early in the project.

- Under-financed parties in the contract, especially the owner. Construction is a cash flow sensitive process, and financial problems by any party will often affect all other parties. Performing tactful credit checks before entering into contracts can avoid much of this problem.

- "Fast-tracked" projects. These projects typically require construction to start before the design is complete. This procedure often leads to expensive changes in the design during construction and severely impacts the contractor's operations. Finally, the project ultimately will cost significantly more than if it had been built within a normal time frame, in which the

project was fully planned before starting. If such a project must be undertaken, communication and documentation become paramount. Strong differences of opinion are bound to surface, and it will be necessary to defend any action or positions taken, if the expected disputes arise.

- Parties with reputations for claims. Some contractors see changes and claims as logical vehicles to make up for money that was excluded from the original bid. This procedure allows them to be the "low bidder" but causes untold frustration and problems after the project is underway. All wise owners, designers, and contractors should steer clear of such parties whenever possible.

BIBLIOGRAPHY

1. American Institute of Architects. "Selecting An Attorney." Newsletter for the American Institute of Architects, Special Issue, December, 1985.
2. American Institute of Architects. The Architect's Handbook of Professional Practice, 11th Ed., (Draft Copy). 1988.
3. American Society of Civil Engineers. "ASCE Risk and Liability Survey." Proceedings from the Construction Division's Conference on Construction Risk and Liability Sharing, Vol. II, 1979.
4. Architectural Record. "Practice: What Can We do about the Liability Crisis Now?" (AR/AIA Symposium Panel). Architectural Record, June, 1986, pp. 35-37.
5. Architectural Record. "Practice: Architect's Responsibility Versus the Liability Crisis" (AR/AIA Symposium Panel). Architectural Record, March, 1987, pp. 35-37.
6. Cohen, Stanley. "Managing Risk in Engineering." Consulting Specifying Engineer, Vol. 1, No. 4, April, 1987, p. 47.
7. Consulting Specifying Engineer. "Liability Roundtable - Can the Risks be Minimized?" Consulting Specifying Engineer, Vol. 2, No. 4, October, 1987, pp. 54-62.
8. Design Professional's Insurance Company. Different by Design. Monterey, CA, 1985.
9. Design Professional's Insurance Company. DPIC Companies' Guide to Better Contracts. Monterey, CA, 1987.
10. Design Professional's Insurance Company. Lessons in Professional Liability: A Notebook for Design Professionals. Monterey, CA, 1988.
11. Firmage, D. Allan. Modern Engineering Practice, Ethical, Professional, and Legal Aspects. Garland Publishing Co., 1980.

12. Fisher, Roger, and Ury, William. Getting to Yes - Negotiating Without Giving In. Penguin Books: NY, NY, 1981.
13. Fisk, Edward R. "Inspector Training and Knowledge of Specifications." Reducing Risk and Liability Through Better Specifications and Inspection, American Society of Civil Engineers, NY, NY, 1982, pp. 60-70.
14. Franklin, James R. "The Liability Crisis: The Architect's Viewpoint." Consulting Engineer, Vol. 67, No. 2, August, 1986, pp. 38-40.
15. Franklin, James R. "Risk Management: 'Standard of Reasonable Care'." Architecture, November, 1987, pp. 94-95.
16. Galson, Edgar L. "Quality Control and Litigation in a Design Professional's Practice." Different by Design, Monterey, CA, 1985, pp. 40-42.
17. Godfrey, Kneeland A. Jr. "Liability: Problem or Crisis?" Civil Engineering, Vol. 56, No. 1, January, 1986, pp. 41-43.
18. Goldbloom, Joseph. "The Resident Engineer and Quality of Construction." Reducing Risk and Liability Through Better Specifications and Inspection, American Society of Civil Engineers, NY, NY, 1982, pp. 78-87.
19. Greenstreet, Bob, and Greenstreet, Karen. The Architect's Guide to Law and Practice. Van Nostrand Reinhold Co., Inc.: NY, 1984.
20. Hinze, Jimmie. "The Legal Side of Utility Contractors." National Utility Contractors of America, Vol. 5, No. 12, December, 1981, pp. 10-12.
21. Hohns, H. Murray. Preventing and Solving Construction Contract Disputes. Litton Educational Publishing, Inc., 1979.
22. Howell, Edward B. "Visions from a Crystal Ball." Reducing Risk and Liability Through Better Specifications and Inspection, American Society of Civil Engineers, NY, NY, 1982, pp. 95-100.

23. Kelly, Peter G. "You Will Have Your Day in Court, or Two Lawyers Must Make a Living Out of Every Set of Words." Paper presented at the Inter-Professional Action Conference. Chicago, IL, September 29-30, 1975.
24. Kennedy, William. "Dispute Resolution Under the EJCDC Contract." Consulting Engineer, Vol. 67, No. 2, August, 1986, pp. 38-40.
25. Kraker, Jay. "Good Things Come to those Who Wait." Engineering News Record, Vol. 220, No. 7, February 18, 1988, p. 44.
26. Krizan, William G. "Bonding, Insurance - Falling Short." Engineering News Record, Vol. 220, No. 13, March 13, 1988, pp. 38-43.
27. Lunch, Milton F. "Alternatives for Resolving Disputes." Water/Engineering and Management, Vol. 133, No. 7, July, 1986, pp. 14-15.
28. Marschall, Albert R. "Higher Quality - Lower Costs: A Winning Combination." Reducing Risk and Liability Through Better Specifications and Inspection, American Society of Civil Engineers, NY, NY, 1982, pp. 113-117.
29. Moore, James C., and Norton, William F. "Design Professionals and the Written Word: A Basic Component of an Effective Loss Prevention Program." Different by Design, Monterey, CA, 1985, p. 18.
30. Morton, Rebecca J. Engineering Law, Design, and Professional Ethics. Professional Engineering Registration Program: San Carlos, CA, 1983.
31. Nielsen, Kris R., and Nielsen, Mary Jane. "Risks and Liabilities of Specifications." Reducing Risk and Liability Through Better Specifications and Inspection, American Society of Civil Engineers, NY, NY, 1982, pp. 4-21.
32. Nigro, William T. "Redi-check." Student Guide for Construction Contract Administration and Management. Naval School, Civil Engineer Corps Officers: Port Hueneme, CA, 1982.
33. O'Brien, James J. Construction Delay, Responsibilities, Risks, and Litigation. Cahners Books International, Inc.: Boston, MA, 1976.

34. Ostrower, Donald A. "Going Bare Part 1: The Incidence of Claims." Consulting Engineer, Vol. 65, No. 6, December, 1985, pp. 55-56.
35. Parks, Gary A., and McBride, Robert R. "Control of Frivolous Lawsuits and Loss Prevention." Journal of Professional Issues in Engineering, Vol. 112, No. 4, October, 1986, pp. 249-255.
36. Progressive Architect. "P/A Reader Poll: Liability." Progressive Architect, December, 1986, pp. 14-16.
37. Puget Sound Business Journal. Puget Sound Business Journal's Book of Lists for 1988. Seattle, WA, 1987.
38. Recio, Maria, Ichniowski, Tom, and Krizan, William G. "Davis-Bacon Act on the Griddle." Engineering News Record, Vol. 216, No. 11, March 13, 1986, p. 62.
39. Rubin, Debra K. "Insurance Costs Still a Burden." Engineering News Record, Vol. 218, No. 16, October 15, 1987, p. 76.
40. Rubin, Robert A., et al. Construction Claims, Analysis, Presentation, and Defense, Van Nostrand Reinhold Co., Inc.: NY, 1983.
41. Sichelman, Lew. "Lawsuits Boom Against Architects and Builders." Builder, September, 1987, pp. 68-72.
42. Sweet, Justin. Legal Aspects of Architecture, Engineering, and the Construction Process. West Publishing Co.: St. Paul, MN, 1985.
43. Tomacetti, Richard L. "Minimum A/E Liability: It's Time to be Reasonable." Civil Engineering, Vol. 57, No. 3, March, 1987, p. 6.
44. Walter, C. Richard. "Liability and Quality Control Impacts of Defining Scope of Services." Journal of Professional Issues in Engineering, Vol. 113, No. 3, July, 1987, pp. 211-215.
45. Woodworth, Robert T. "Conditions Aiding Productive Negotiations." Class Handout for HRMOB 560, "Negotiations." University of Washington, 1980.

APPENDIX - A

List of Interviewees

Name, Address, Phone	Interviewee/Position
CONSTRUCTION CONTRACTORS	
1. Ferguson Construction 7433 5th Avenue South P.O. Box 80867 Seattle, WA 98108, 767-3810	Mark P. Lunsford/Vice President Operations
2. Glad Construction Group, Inc. 701 Dexter Ave. North, Suite 212 Seattle, WA 98109, 284-5050	A. Don Glad/Chairman of the Board
3. J.B. Mechanical Contractors 18932 Highway 99 P.O. Box 5957 Lynnwood, WA 98046, 672-8075	John D. Barringer/Project Manager
4. Northwest Electric Co. 420 Yale Ave N. Seattle, WA 98109, 623-2131	Susan A. Garrison/Vice President
5. Paschen Contractors, Inc. 1530 Eastlake Ave E., Suite 202 Seattle, WA 98102, 340-0370	Jack Rawlings/Project Manager
6. SDL Corporation 2100 112th NE Box 1685 Bellevue, WA 98009, 455-2101	David Lowry/President
7. Sellen Construction Co. 228 9th Avenue North P.O. Box 9970 Seattle, WA 98109, 364-4800	Richard Redman/President and CEO
8. Turner Construction 600 University St., VIM Room Seattle, WA 98101, 624-1757	August M. Sestrap/General Superintendent
9. W.G. Clark Construction Co. 408 Aurora Ave. N. Seattle, WA 98109, 624-5244	Chris L. Clark/President
10. Woodworth & Company, Inc. 1200 E. "D" St. Tacoma, WA 98421, 383-3585	John A. Woodworth/President

DESIGNER FIRMS

1. Anderson Bjornstad Kane Jacob Thomas F. Mahoney/Vice President
220 West Harrison
Seattle, WA 98119, 285-1185
2. Brown and Caldwell Jack Warburton/Vice President
100 West Harrison Street
Seattle, WA 98119, 281-4000
3. Callison Partnership Richard Meyer/Project Manager
1423 Third Ave., Suite 300
Seattle, WA 98101, 623-4646
4. CENTRAC Gareth A. Grube/Vice President
18804 N. Creek Parkway, #105
Bothell, WA 98011, 486-6600
5. Dames and Moore Joseph Lamont, Jr./Senior Partner
155 NE 100th Street, Suite 500 (Ltd.)
P.O. Box 75981
Seattle, WA 98125, 523-0560
6. Hewitt Daly Isley James Daly/Senior Partner
400 Doyle Building
119 Pine Street
Seattle, WA 98101, 624-8154
7. John Graham Associates James C. Pearce/Principal
520 Pike Street
Seattle, WA 98101, 461-6000
8. Martenson & Associates Richard Martenson/Principal
1932 First
Seattle, WA 98101, 728-0930
9. Northwest Architectural Co. Dale Brookie/President and Principal
303 Battery
Seattle, WA 98101, 441-4522
10. R.W. Beck and Associates Donald R. Melnick/Partner and Manager
2121 Fourth Avenue Construction Services Office
Seattle, WA 98121, 441-7500

LAW FIRMS

1. Bryan, Schiffrin & McMonagle Daniel S. McMonagle, Jr./Partner
First and Cedar Building, Suite 350
2701 First Avenue
Seattle, WA 98121, 448-8100
2. Culp Guterson and Grader Tyler Ellrodt/Partner
One Union Square
600 University Avenue
Seattle, WA 98101, 624-7141
3. Davis, Wright & Jones David Groff/Chairman of Construction
1501 Fourth Ave., Suite 2600 Law Department
Seattle, WA 98101, 622-3150
4. Ferguson & Burdell Bryan E. Lee/Associate Partner
One Union Square
600 University Avenue
Seattle, WA 98101, 622-1711
5. James M. Kristof James M. Kristof
601 AGC Building
1200 Westlake North
Seattle, WA 98109, 282-9811
6. Lawrence & Associates Kerry C. Lawrence
2200 112th Ave. NE, Suite 200
Bellevue, WA 98004, 455-2332
7. Oles, Morrison, Rinker Brad Powell/Partner
Columbia Center, Suite 3300
701 Fifth Avenue
Seattle, WA 98104, 623-3427
8. Taylor & Hintze Randall Zuke/Associate Partner
900 AGC Building
1200 Westlake North
Seattle, WA 98109, 282-4004
9. Ulin Dann Elston and Lambe Wade Dann/Partner
4800 Columbia Center
701 Fifth Avenue
Seattle, WA 98104, 624-4848
10. Williams Kastner and Gibbs Judd Lees/Partner
10900 NE Fourth, Suite 20000
Bellevue, WA 98004, 462-4700

APPENDIX - B

ATTORNEY INTERVIEW QUESTIONNAIRE

INTERVIEWEE INFORMATION

1. Name of firm? _____
2. Name of interviewee? _____
3. Position within the firm? _____
4. How long have you been with the firm? _____ years

FIRM'S BACKGROUND INFORMATION

1. What type of practice does your firm have?
____ Construction only ____ Business only
____ General ____ Multi-disciplined with construction expertise
____ Other _____
2. How many years has your firm been in business? _____ Years.
3. What percentage of your firm's cases involve construction ? _____ %
4. During what percentage of these cases did your firm represent the owner? _____ % Designer _____ % Prime contractor _____ %
Other contractor or supplier _____ %
5. What percentage of these cases involved competitively bid contracts?
_____ %
6. What percentage of these cases were contracted for a firm fixed price? _____ % Cost plus _____ % Unit price _____ % Other _____ %
7. What is the percentage breakdown of your cases by the type of owner?
Public/Federal _____ % Public/State _____ % Public/Local _____ %
Private/Business _____ % Private/Individual _____ %
8. Which type of owner do you feel generates the most disputes requiring legal counsel? _____.

Why? _____

9. How many construction cases does your firm have in progress?
- a. Last year _____ .
- b. How has this number changed in the last ten years? _____.
10. What was the average value of the issues in the cases that your firm handled?
- a. Last year _____ .
- b. How has this number changed in the last ten years? _____.
11. What types of services do you offer your construction clients?
- _____
- _____
- _____
- _____
12. Does your firm provide preprinted contracts for your client to use?
- ____ yes ____ no
- Why? _____
- _____
- _____

ATTITUDE TOWARD LEGAL ACTION

1. How has the number of disputes in construction changed over the last ten years? _____ increased _____ decreased _____ no change
2. Do you feel that there is too much involvement by lawyers in the construction industry? ____ yes ____ no
3. Do you feel that the number of disputes requiring either arbitration, litigation, or determination by a contracting disputes panel is excessive? ____ yes ____ no
4. What do you feel is the primary reason for the number of disputes in the construction industry?
- ____ The nature of society.
- ____ The nature of the industry.
- ____ Poor contracts.
- ____ The "low bidder" system.
- ____ Unreasonable owners.
- ____ The economic situation.
- ____ Other _____

5. What do you see as the biggest advantage of using legal counsel for your clients? (ie. Gets the "other side's" attention, opens up litigation as an option, protects my interests.)

6. What do you see as the biggest disadvantage of using legal counsel for your clients? (ie. lawyers are too nontechnical, the system is too slow, they cost too much.)

7. Construction is different from other businesses, does your firm see any differences from a legal perspective? ____ yes ____ no

8. Do you feel a formal background in construction is very beneficial for your lawyers who handle construction cases? _____

9. Do you present options to your clients based on the principles involved in the dispute, the economics of the case, or both? _____

10. Do your clients make decisions concerning disputes based primarily on principles or economics? ____ principles ____ economics

11. What method of disputes resolution do you prefer? _____

Why? _____

ACTUAL LEGAL SERVICES THAT YOUR COMPANY HAS PROVIDED

1. At what phase do clients normally seek your involvement in a project?

____ Bidding stage.

____ Prior to signing a contract.

____ Immediately after signing a contract.

____ At the first sign of a legal problem.

____ As soon as the specific need for legal counsel is confirmed.

____ After the problem has escalated beyond the control of the normal contract administration staff.

____ Only as a last resort.

____ Other _____

2. At what phase do you recommend clients normally seek your involvement in a project?

☐ Prior to signing a contract.
☐ Immediately after signing a contract.
☐ At the first sign of a legal problem.
☐ As soon as the specific need for legal counsel is confirmed.
☐ After the problem has escalated beyond the control of the normal contract administration staff.
☐ Only as a last resort.
☐ Other _____

3. What percentage of your clients seek advice to prevent disputes? ____%

4. What percentage of your clients seek advice while the dispute is in progress? ____ %

5. What percentage of your clients seek advice after the dispute is over to try and "put the pieces together"? ____ %

6. How many times during a typical year does the average client consult with you on different issues?

a. Last year? _____

b. How has this number changed in the last ten years? _____.

7. What percentage of your clients have had you review the contracts that they use? ____ %

8. Do clients readily seek your consultation for non-dispute issues?
☐ yes ☐ no

Why? _____

9. What are the primary sources of the disputes that you see? (ie bid protests, changed conditions, payments) _____

10. What percentage of the disputes were under a firm fixed price contract? ____ % Cost plus ____ % Unit price ____ % Other ____ %

11. What percentage of the disputes were under a contract that was competitively bid? ____ %

12. What is the percentage breakdown of these disputes by type : owner?
Public/Federal ____ % Public/State ____ % Public/Local ____ %
Private/Business ____ % Private/Individual ____ %

13. What percentage of these disputes were resolved by negotiation? ____ %
By arbitration ____ % By contracting disputes panel ____ %
By litigation ____ %

14. Do clients readily seek your consultation for disputes?
____ yes ____ no

Why? _____

15. What do you feel are the keys to avoiding disputes in the future?

16. Do you have any objection to having your participation in this
research project acknowledged in the report itself? (Your responses
will be kept confidential) ____ yes ____ no

17. Would you care to make any additional comments? _____

APPENDIX - C

CONTRACTOR INTERVIEW QUESTIONNAIRE

INTERVIEWEE INFORMATION

1. Name of firm? _____
2. Name of interviewee? _____
3. Position within the firm? _____
4. How long have you been with the firm? _____ years

FIRM'S BACKGROUND INFORMATION

1. What type of projects does your firm do?
____ Building ____ Highway/heavy ____ Mechanical
____ Electrical ____ Utility ____ Other _____
2. How many years has your firm been in business? _____ Years.
3. What percentage of the time does your firm operate as the prime or general contractor? _____ %
4. What percentage of your contracts are competitively bid? _____ %
5. What percentage of your contracts are firm fixed price? _____ %
Cost plus _____ % Unit price _____ % Other _____ %
6. Which type of contract (firm fixed price, cost plus, unit price, etc) would you most prefer to enter? _____.
Why? _____

7. Which type of contract would you least prefer to enter? _____.
Why? _____

8. What is the percentage breakdown of your work by type of owner?
Public/Federal _____ % Public/State _____ % Public/Local _____ %
Private/Business _____ % Private/Individual _____ %

9. Which type of owner would you most prefer to work for? _____.

Why? _____

10. Which type of owner would you least prefer to work for? _____.

Why? _____

11. What was the annual dollar volume of work for your firm?

a. Last year _____ dollars.

b. How has this volume changed in the last ten years? _____.

12. How many projects does your firm complete in a typical one year period?

a. Last year _____.

b. How has this number changed in the last ten years? _____.

13. What was the average size of your projects in dollars?

a. Last year _____ dollars.

b. How has this number changed in the last ten years? _____.

ATTITUDE TOWARD LEGAL ACTION

1. How has the number of disputes in construction changed over the last ten years? _____ increased _____ decreased _____ no change

2. In your opinion, do you feel that the construction industry has too many disputes requiring the use of legal counsel?
 _____ yes _____ no

3. What do you feel is the primary reason for the number of disputes in the construction industry?

- _____ The nature of society.
- _____ The nature of the industry.
- _____ Unreasonable owners.
- _____ Poor contracts and specifications.
- _____ The "low bidder" system.
- _____ Too many lawyers.
- _____ The economic situation.
- _____ Other _____

4. What do you see as the biggest advantage of using legal counsel?
(ie. Gets the "other side's" attention, opens up litigation as an option, protects my interests.)

5. What do you see as the biggest disadvantage of using legal counsel?
(ie. lawyers are too nontechnical, the system is too slow, they cost too much.)

6. How well do you feel that your lawyer understands construction?
____ Very Well ____ Well ____ Not very well
7. Do you feel that your lawyer always has your best interest in mind?
____ yes ____ no
8. Do you feel that you "get your money's worth" when using a lawyer?
____ yes ____ no
9. Do you make decisions concerning disputes based primarily on principles or economics? ____ principles ____ economics
10. What method of disputes resolution do you prefer? _____
Why? _____

ACTUAL LEGAL SERVICES THAT HAVE BEEN PROVIDED TO YOUR COMPANY

1. What is your company's current relationship with the attorney that represents your company?
- ____ We locate an attorney once a problem surfaces that requires his services.
- ____ We maintain a continuing relationship with a single attorney who takes care of all the business's legal requirements.
- ____ We maintain a continuing relationship with a specific law firm with a variety of lawyers who take care of all the business's legal requirements.
- ____ We have "in house" counsel.

2. What type of attorney represents your company?

- ☐ A general attorney with no specific expertise.
- ☐ An attorney with expertise in business and corporate matters.
- ☐ An attorney with expertise in construction matters.
- ☐ Different attorneys, depending upon the specific problem.
- ☐ Different attorneys within the same law firm, depending upon the specific problem.

3. At what phase do you normally involve your attorney in a project?

- ☐ Bidding stage.
- ☐ Prior to signing a contract.
- ☐ Immediately after signing a contract.
- ☐ At the first sign of a legal problem.
- ☐ As soon as the specific need for legal counsel is confirmed.
- ☐ After the problem has escalated beyond the control of the normal contract administration staff.
- ☐ Only as a last resort.
- ☐ Other _____

4. How many times during a year does your company consult with an attorney on different issues?

- a. Last year _____.
- b. How has this number changed in the last ten years? _____.

5. Do you ever consult a lawyer for issues other than a contractual dispute? _____ yes _____ no

If so, what types of issues require such consultation?

6. How many times have you consulted a lawyer for an issue other than a dispute?

- a. Last year _____.
- b. How has this number changed in the last ten years? _____.

7. Do you readily seek consultation from a lawyer or other consultant for non-dispute issues?

____ yes ____ no

Why? _____

8. How many disputes arise that require consulting a lawyer?

a. Last year _____.

b. How has this number changed in the last ten years? _____.

9. What are the primary sources of these disputes? (ie bid protests, changed conditions, payments) _____

10. What percentage of the disputes were under a firm fixed price contract? ____ % Cost plus ____ % Unit price ____ % Other ____ %

11. What percentage of the disputes were under a contract that was competitively bid? ____ %

12. What is the percentage breakdown of these disputes by type of owner?
Public/Federal ____ % Public/State ____ % Public/Local ____ %
Private/Business ____ % Private/Individual ____ %

13. What percentage of these disputes were resolved by negotiation prior to entering a formal dispute settlement procedure? ____ %
By negotiation after starting a formal settlement procedure? ____ %
By arbitration ____ % By contracting disputes panel ____ %
By litigation ____ %

14. Do you readily seek legal consultation for disputes?

____ yes ____ no

Why? _____

15. Have your experiences with lawyers encouraged your use of them in the future or discouraged it? _____

16. What do you feel are the keys to avoiding disputes in the future?

17. Do you have any objection to having your participation in this research project acknowledged in the report itself? (Your responses will be kept confidential) ____ yes ____ no

18. Would you care to make any additional comments? _____

APPENDIX - D

DESIGNER INTERVIEW QUESTIONNAIRE

INTERVIEWEE INFORMATION

1. Name of firm? _____
2. Name of interviewee? _____
3. Position within the firm? _____
4. How long have you been with the firm? _____ years

FIRM'S BACKGROUND INFORMATION

1. What type of practice does your firm have?
☐ Architecture only ☐ Engineering only
☐ Multi-discipline ☐ Other _____
2. How many years has your firm been in business? _____ Years.
3. What type of projects does your firm design? _____

4. What percentage of the time does your firm operate as the lead designer? _____ %
5. What percentage of your designs are competitively bid? _____ %
6. What percentage of your designs are contracted for a firm fixed price? _____ % Cost plus _____ % Unit price _____ % Other _____ %
7. Which type of contract (firm fixed price, cost plus, unit price, etc) would you most prefer to see the client use? _____.

Why? _____

8. Which type of contract would you least prefer to see the client use?

_____.

Why?

9. What is the percentage breakdown of your designs by the type of client? Public/Federal _____ % Public/State _____ %

Public/Local _____ % Private/Business _____ %

Private/Individual _____ %

10. Which type of client would you most prefer to work for?

_____.

Why?

11. Which type of client would you least prefer to work for?

_____.

Why?

12. What were the annual billings for your firm?

a. Last year _____ dollars.

b. How has this number changed in the last ten years? _____.

13. How many projects designed by your firm are typically completed each year?

a. Last year _____.

b. How has this number changed in the last ten years? _____.

14. What was the average size of the construction contracts to complete one of your projects in dollars?

a. Last year _____ dollars.

b. How has this number changed in the last ten years? _____.

15. Does your firm offer construction management services?

___ yes ___ no

If yes, what services do you provide? _____

Why?

16. Does your firm provide construction contracts for your clients?

___ yes ___ no

If yes, do you provide standard form or tailor-made contracts? _____

SF ___ TM

Why? _____

ATTITUDE TOWARD LEGAL ACTION

1. How has the number of disputes in construction changed over the last ten years? _____ increased _____ decreased _____ no change

2. In your opinion, do you feel that the construction industry has too many disputes requiring the use of legal counsel?

___ yes ___ no

3. What do you feel is the primary reason for the number of disputes in the construction industry?

- ___ The nature of society.
- ___ The nature of the industry.
- ___ Unreasonable clients.
- ___ Poor contractors.
- ___ The "low bidder" system.
- ___ Too many lawyers.
- ___ The economic situation.

4. What do you see as the biggest advantage of using legal counsel?
(ie. Gets the "other side's" attention, opens up litigation as an option, protects my interests.)

5. What do you see as the biggest disadvantage of using legal counsel?
(ie. lawyers are too nontechnical, the system is too slow, they cost too much.)
- _____
- _____
- _____

6. How well do you feel that your lawyer understands construction?
 _____ Very well _____ Well _____ Not very well
7. Do you feel that your lawyer always has your best interest in mind?
 _____ yes _____ no
8. Do you feel that you "get your money's worth" when using a lawyer?
 _____ yes _____ no
9. Do you make decisions concerning disputes based primarily on principles or economics? _____ principles _____ economics
10. What method of disputes resolution do you prefer? _____
- Why? _____
- _____
- _____

ACTUAL LEGAL SERVICES THAT HAVE BEEN PROVIDED TO YOUR COMPANY

1. What is your company's current relationship with the attorney that represents your company?
- _____ We locate an attorney once a problem surfaces that requires his services.
- _____ We maintain a continuing relationship with a single attorney who takes care of all the business's legal requirements.
- _____ We maintain a continuing relationship with a specific law firm with a variety of lawyers who take care of all the business's legal requirements.
- _____ We have "in house" counsel.
2. What type of attorney represents your company?
- _____ A general attorney with no specific expertise.
- _____ An attorney with expertise in business and corporate matters.
- _____ An attorney with expertise in construction matters.
- _____ Different attorneys, depending upon the specific problem.
- _____ Different attorneys within the same law firm, depending upon the specific problem.

3. At what phase do you normally involve your attorney in a project?

- ☐ Prior to signing a contract with a client.
- ☐ Immediately after signing a contract with a client .
- ☐ At the first sign of a legal problem.
- ☐ As soon as the specific need for legal counsel is confirmed.
- ☐ After the problem has escalated beyond the control of the normal contract administration staff.
- ☐ Only as a last resort.
- ☐ Other _____

4. How many times during a typical year did your company consult with an attorney on different issues?

a. Last year? _____

b. How has this number changed in the last ten years? _____.

5. Do you ever consult a lawyer for issues other than a contractual dispute? ☐ yes ☐ no

If so, what types of issues require such consultation?

6. Have you had your lawyer review the contracts that you use and that you provide your clients? ☐ yes ☐ no

7. How many times have you consulted a lawyer for an issue other than a dispute?

a. Last year? _____

b. How has this number changed in the last ten years? _____.

8. Do you readily seek consultation from a lawyer or other consultant for non-dispute issues?

☐ yes ☐ no

Why?

9. How many disputes arise that require consulting a lawyer?

a. Last year? _____

b. How has this number changed in the last ten years? _____.

10. What are the primary sources of these disputes? (ie bid protests, changed conditions, payments) _____

11. What percentage of the disputes were under a firm fixed price contract? ____ % Cost plus ____ % Unit price ____ % Other ____ %
12. What percentage of the disputes were under a contract that was competitively bid? ____ %
13. What is the percentage breakdown of these disputes by type of client? Public/Federal ____ % Public/State ____ % Public/Local ____ % Private/Business ____ % Private/Individual ____ %
14. What percentage of these disputes requiring legal assistance were resolved by negotiation? ____ % By arbitration ____ %
 By contracting disputes panel ____ % By litigation ____ %
15. Do you readily seek legal consultation for disputes?
 ____ yes ____ no
- Why? _____

16. Have your experiences with lawyers encouraged your use of them in the future or discouraged it? _____

17. What do you feel are the keys to avoiding disputes in the future?

18. Do you have any objection to having your participation in this research project acknowledged in the report itself? (Your responses will be kept confidential) ____ yes ____ no
19. Would you care to make any additional comments? _____

